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NEVOXANTHO-ENDOTHELIOMA OR JUVENILE XANTHOMA

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In 1912 McDonagh [1] described five cases in which were noted a special type of multiple growths in the skin which were conspicuous because of their yellow color. In the first case the lesions were present at birth, appearing as brownish-red swellings, raised well above the surface of the skin, of firm consistency, elastic, almost cartilaginous. The surface of the tumors was smooth and showed numerous small injected capillaries. When McDonagh first saw the patient at the age of 2 months, the lesions were most numerous on the face, especially on the eyelids, and there were two growths on the neck, one on the left arm, one or two on each leg and a few scattered about the trunk. The tumors were bright yellow and slightly depressed in the center and had a glazed surface closely resembling that of xanthoma planum. The edge of each swelling was reddish, where vessels could plainly be seen. The lesions varied from 0.5 to 1 cm. in diameter, were raised about 3 or 4 mm. above the surface, were of firm consistency and moved with the surrounding skin, which was in every way normal. A year later the swellings were of the same size, not such a bright yellow and flush with the surface of the surrounding skin. The lesions still had the glazed appearance, the central depression had disappeared, the edges were of the same color as the rest of the growth and there were no dilated capillaries. When the patient was seen at the age of 3 years all the lesions had disappeared spontaneously, leaving scarcely visible whitish scars of glazed appearance.

In the second case the lesions had appeared two weeks after birth, as reddish swellings the size of lentils scattered over the body. Many disappeared soon afterward, while others increased in size, became

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1. McDonagh: A Contribution to Our Knowledge of the Nevo-Xantho-Endotheliomata, Brit. J. Dermat. **24**:85, 1912.

yellow and were surrounded by a reddish halo. The lesions then grew smaller and disappeared spontaneously, but fresh swellings appeared up to the age of 5 months, at which time the patient was examined by McDonagh. The mother of the infant stated that she was born with similar swellings, which appeared and disappeared up to the age of 14.

In the third case the patient was a boy, aged 10 months, the eruption being confined to the forehead and upper part of the face and consisting of brownish-red to yellow papules and raised spots, all of which disappeared spontaneously. The patient was presented with a diagnosis of multiple xanthoma, but at the meeting of the dermatologic section of the Royal Society of Medicine it was regarded as urticaria pigmentosa, a diagnosis which a microscopic examination proved to be incorrect.

In the fourth case the patient was a girl, whose lesions first appeared about three weeks after birth, as small, red, raised spots, which became yellow later. Some of the lesions persisted, while others disappeared spontaneously.

The patient in the fifth case was presented by Bunch at the meeting of the British Dermatological Society in November 1911, with a diagnosis of multiple angioma. The child was first seen when 3 weeks old, and the lesions had been present since birth, there being more than a hundred purple, raised tumors from the size of a pea to that of a small nut on the trunk, limbs, face and scalp. They became pale under pressure with the diascope, and in most instances they were soft to the touch, but one or two on the legs seemed slightly firmer.

McDonagh also included some cases reported in the literature. In Kobner's case the patient was 27 years of age, the lesions having first appeared at the age of 2 years. Thibierge reported cases occurring in two brothers, the eruptions having begun at the age of 8 and 14 years, respectively. Eichhoff's case was in a female in whom the lesions appeared two months after birth, and Bizzozero reported a case of a boy who was born with the xanthoma-like lesions.

McDonagh summarized his report by stating that there is a special form of multiple growths in the skin which are conspicuous because of their yellow color. The growths may be present at birth or may not appear until later, and there is sometimes a history of other cases in the family. They may persist for many years, but they tend to ultimate spontaneous cure. They may commence as red tumors, like angiomas, and become yellow later.

From a study of the histologic sections in three of the cases which he reported and of the pathologic reports of four of the cases selected by him from the literature, McDonagh concluded that the tumors were endotheliomas belonging to the class of nevi and that owing to a fatty change which occurs in the cells during their dissolution a xanthoma-like condition is produced.

The next case to be recorded in the literature was that of Wise,[2] described in 1919. The patient was a Jewish boy, aged 22 months, who presented hundreds of macular and papular lesions on the trunk and extremities, most abundant on the abdomen. The macules were rose-red and bluish red, while the papules were more pronounced in color, most of them being yellowish brown and salmon-yellow. The lesions averaged about the size of a split pea. The eruption was thought to be urticaria pigmentosa or xanthelasmoidea until a histopathologic study was made.

The next case was reported by Jacobi and Grund [3] in 1930. The patient was an infant of 16 months, in whom at the age of 3 months there suddenly developed a large number of small reddish-brown tumors

Fig. 1.—Nodules on the back of the thighs.

on the face and body, much more numerous on the former. The lesions varied in size from that of a pinhead to that of a large pea, definitely raised and sharply defined from the surrounding normal skin. Some were of flesh color and pinkish yellow, but the majority were reddish brown. The changes in the blood in this case suggested hyperactivity of lymphoid and endothelial tissues. The condition was clinically diagnosed xanthoma tuberosum multiplex at a meeting of the Atlantic Dermatological Conference, but the histopathologic picture showed the presence of many cells, which the authors stated were verified as polynuclear endothelial cells, no definite xanthoma cells being found.

We have observed a case which from the clinical standpoint exactly corresponds to those reported by McDonagh.

2. Wise, F.: Multiple Endothelioma of Skin, Am. J. M. Sc. **157**:236, 1919.

3. Jacobi, R., and Grund, J. L.: Endothelioma Cutis: Nevo-Xantho-Endothelioma, New England J. Med. **202**:1247, 1930.

Fig. 2.—The nodules on the right arm and forearm were among the largest present, while those on the trunk were small.

Fig. 3.—A large dome-shaped lesion on the flexor surface of the right forearm.

REPORT OF CASE

Donald C., aged 5½ years, of American parentage, was examined because of the presence of yellowish nodules on the trunk, extremities and left eyelid. The first lesion had appeared at the age of 3 years on the left thigh as a small rounded reddish papule which increased in size slowly, and eventually became yellowish. Other lesions had gradually developed until at the time of examination the child presented two lesions on the upper part of the right arm, one on the right forearm, three on the left thigh, one on the right thigh, one on the left lower eyelid near

Fig. 4.—A section of a dermal papule, which is composed of a cellular infiltration fairly well demarcated from the surrounding tissues; × 100.

the outer canthus and several scattered over the trunk (figs. 1, 2 and 3). The lesions on the trunk were smallest, from the size of a pinhead to that of shot, while the largest one, on the upper part of the right arm, had a diameter of about 1.5 cm. The tops of most of the lesions were smooth and rounded, but two of the larger lesions were definitely flattened. The smaller lesions, which were younger, presented from a flesh to a reddish color, sometimes with a yellowish tinge, while the larger nodules were distinctly yellowish and glazed, although some were reddish about the base, owing to the presence of numerous dilated capillaries. The younger

lesions were rather soft, but infiltration increased gradually with further development, until the oldest lesions were very firm. There was no history of spontaneous disappearance of any of the lesions.

The patient was rather slender but healthy. The personal and family history were negative, and the physical examination gave negative results aside from the lesions of the skin. A blood count showed 5,200,000 red cells, hemoglobin content of 80 per cent and 18,600 white cells, with 50 per cent polymorphonuclears, 4 per

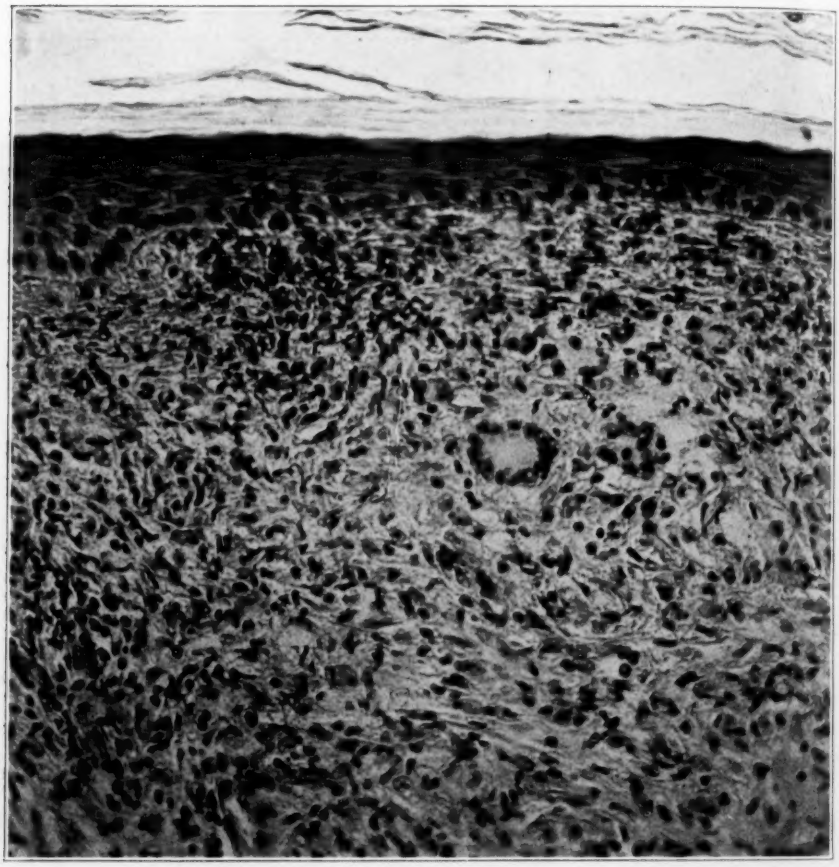

Fig. 5.—A section showing the epidermis to be flattened. The upper part of the corium is filled by a cellular infiltration consisting of many histiocytes, which have a pale foamy cytoplasm, a few giant cells and many fibroblasts; × 250.

cent large mononuclears, 40 per cent lymphocytes and 6 per cent eosinophils. The sugar content of the blood was 71 mg. per hundred cubic centimeters, the nonprotein nitrogen content 29 mg. and the cholesterol content 167 mg.

The patient was presented before the Chicago Dermatological Society with a diagnosis of nevoxantho-endothelioma because the clinical picture was so thoroughly in accord with the description by McDonagh. Later a fully developed firm, yellowish nodule was removed for study.

The specimen, stained with hemalum and eosin, consisted of a dermal papule which extended deeply into the corium (fig. 4). It was covered by a thin epidermis, apparently flattened by pressure from below, and showed a thin, nonnucleated scale. The granular layer was continuous, and the basal layer was intact throughout. At the sides of the papule the epidermis showed acanthosis and lengthening of the rete pegs.

The papule was fairly well demarcated from the surrounding tissues, but it had no capsule. It consisted of a densely packed cellular infiltration which extended from the deep portion of the corium up to the epidermis everywhere except at the center, where there was a subepidermal thin layer of dense fibrous connective tissue. The predominating cell type throughout was a large histiocyte with a poorly defined, pale, foamy cytoplasm and a circumscribed, large, ovoid or irregularly rounded pale nucleus, which contained an occasional small dark nucleolus. In some places the cells became elongated and thin and resembled fibroblasts; the cells lay in parallel rows between bands of connective tissue fibers. The greatest amount of connective tissue lay near the bottom and sides of the papule. Beneath the epidermis lay several large giant cells, each consisting of a peripheral ring of ovoid nuclei surrounding a pale central cytoplasm (Touton type). A few large irregularly multinucleated giant cells were also present (fig. 5). Throughout the infiltrate lay scattered many lymphocytes, and in places they were numerous enough to form small clumps. Many small blood vessels lay within the infiltrate, lined by a single layer of flat endothelial cells and filled with erythrocytes, while in a few small vessels there was proliferation of the intima.

A thick mass of similar infiltration extended down deeply along a hair follicle, and this was sharply circumscribed by a dense connective tissue capsule. The blood vessels lying in the corium at the sides of the papule had normal walls, but they were surrounded by thin mantles of histiocytes and lymphocytes. The sweat glands were normal.

The sudan III stain showed the presence of many droplets of orange-staining lipoids throughout the cellular infiltrate and within the giant cells and a smaller amount in some of the basal cells of the epidermis and in the scale.

Polariscopic examination revealed many doubly refractile crystals throughout the papule.

The picture seemed to coincide with that described by McDonagh, so that we thought that the diagnosis made on clinical grounds was definitely confirmed. We asked Dr. Richard H. Jaffé to examine the specimens, however, and his observations were largely responsible for the interpretation given later.

COMMENT

In McDonagh's first case an early biopsy revealed the cutis and subcutis to be infiltrated by a dense mass of polygonal, spindle-shaped and round cells, each containing a well stained central or eccentric nucleus, lying in a groundwork of connective tissue. There was a sharp division of the cutis from the subcutis by a horizontal band of connective tissue, from which many fibers passed upward to lie between the infiltrating cells. The cells in the subcutis were more spindle-shaped. The larger blood vessels were normal, while in the capillaries and lymphatics there was endothelial proliferation which sometimes occluded the lumen. The proliferating endothelial cells of the vessels extended outward to invade

the surrounding tissue and could not be distinguished from the cells of the growth. In places the cells showed degeneration and put out processes to join together. McDonagh interpreted the microscopic picture as being strongly suggestive of endothelioma. The tissue was not stained for lipoids.

A second biopsy, a year later, revealed the endothelial cells to have degenerated. Some were swollen and joined together to form a mass with a granular protoplasm having a honeycombed appearance, while others were large, irregular and poorly stained and contained two or three nuclei. Staining with osmic acid showed fatty granules in the cells, especially in those nearest the epidermis, but there were no deposits of fat. The author stated that except for the absence of fatty droplets the cells simulated those of xanthoma in every other respect. There was more fibrous tissue than was noted in the previous biopsy specimen; the vessels showed swelling of the poorly stained endothelial cells, often completely occluding the lumen, and there were many mononuclear leukocytes about the vessels. McDonagh interpreted the condition as being "a naevus of endothelial origin, which, while on its way to a spontaneous cure, underwent changes of a fatty nature, giving the lesions the clinical aspect of xanthoma."

In a biopsy specimen in his second case McDonagh noted degeneration of the epidermal cells and disintegration of the basal layer. The cells of the infiltration were polygonal and spindle-shaped, stained poorly but had a well stained nucleus and were massed together. Some were disintegrating and were replaced by newly formed connective tissue. Many capillaries showed obliteration of the lumen by swollen endothelial cells, which were continuous with the surrounding cells. McDonagh also observed subepidermal "giant cells," which were formed by obliterated capillaries, in which the peripheral nuclei were those of the endothelial lining cells. A sudan III stain showed the presence of fat in the cell masses, in the protoplasm of individual cells and in the giant cells.

In studying a biopsy specimen taken from the patient presented by Bunch, McDonagh noted a similar cellular endothelial growth, which contained capillaries, the endothelial cells of which were continuous with and of the same nature as those surrounding them. There were no giant cells. No examination for fat was carried out.

In a comparison of the observations in our case with those reported by McDonagh, we found no extension of the infiltrate into the subcutis and no definite evidence that the infiltrating cells were derived from the endothelial cells lining the capillaries. The giant cells in our case were multinucleated cells rather than cross-sections of obliterated capillaries. McDonagh's statement that "except that no fatty droplets are found, the cells simulate xanthoma cells in every other respect" is difficult to

reconcile with his description of the presence of fatty granules in some of the cells, notably those situated nearest the epidermis, as demonstrated with osmic acid.

The observations in our case differed histologically from those described by Wise [2] for nevoxantho-endothelioma. In his case "the infiltrate was composed of closely massed cells of remarkably uniform shape and size. The cells possessed a sharply defined, well rounded prominent nucleus and a distinctly outlined, round or oval, in some cases also polygonal, cell body. The integrity of the protoplasmic body of the individual cells was maintained even where they were densely packed, so that a mosaic-like effect obtained. The morphologic and tinctorial characteristics of the cells identified them as endothelial cells." There was no report of staining to determine the presence of lipoids or of a polariscopic examination for doubly refractile crystals. The "xantho" appellation was evidently suggested by the clinical appearance of the yellowish-brown and salmon-yellow papules.

The condition in the case of Jacobi and Grund [3] seems to us to differ histologically from that in our case and in the cases of McDonagh. In their case the corium contained a vascular infiltrate of fibroblasts, endothelial cells and cells resembling giant cells which represented obliterated capillaries cut in cross-section. No lipoids were demonstrated by the sudan III stain. The authors have informed us that a polariscopic examination was not carried out. The condition in this case apparently was xanthomatous only in the clinical appearance of the lesions.

In a typical xanthoma the histologic changes vary with the age of the lesion, as was pointed out by Pollitzer and Wile.[4] In the earliest lesions there is proliferation of cells in the immediate neighborhood of the papillary and subpapillary blood vessels, an infiltration of the cells by a fatty substance to form young "xanthoma cells" and a similar infiltration of lymph spaces and the basal cells of the epidermis. The xanthoma cells are large oval or rhombic cells, each having a central, well stained nucleus, often with several nucleoli, and a pale, foamy cytoplasm. In larger lesions there is a conglomerate picture of xanthoma cells, fibroblasts and connective tissue. Owing to the hyperplasia of xanthoma cells, their definite relationship to the blood vessels is no longer readily demonstrable. The cells are larger; some are multinucleated, and xanthoma giant cells are present. In the connective tissue surrounding the nests of xanthoma cells fibroblasts are present in great number. In sections from the oldest lesions the appearance at first

4. Pollitzer, S., and Wile, U. J.: Xanthoma Tuberosum Multiplex, J. Cutan. Dis. **30**:235, 1912.

glance is frankly that of fibroma. Xanthoma cells are reduced to a small number in proportion to the amount of fibrous tissue. A great portion of the fatty substance presents the phenomenon of anisotropism.

Jaffé,[5] in a review of the reticulo-endothelial system, demonstrated that the reticulo-endothelial cells have a great affinity for lipoids. They are the cells which usually accumulate lipoids resulting from the local destruction of tissue (pseudoxanthoma) as well as those resulting from a disturbed lipoid metabolism (xanthoma). Jaffé identified the cells of the infiltrate in our case as histiocytes identical with the cells of xanthoma.

Chester and Kugel[6] reviewed the reported cases of the disease first described by Hand and subsequently by Schüller and by Christian. This is characterized anatomically by the formation of a granuloma consisting of foamy lipoid cells, an inflammatory cellular exudate as a response of the tissues to the lipoid substances and proliferation of the connective tissue, and clinically by the localization of the granulomas to produce defects in the cranial bones, exophthalmos and diabetes insipidus. Chester and Kugel suggested that the term xanthoma, meaning a tumor, is hardly applicable to the lesions and offered the term lipoidgranuloma as a more fitting designation of the lesion and lipoidgranulomatosis for the generalized form.

Arzt[7] reported a case in which the condition was similar to that in ours clinically and histologically, and after comparing it with other similar cases in the literature, including those of McDonagh, he grouped them all as instances of xanthoma juveniles. On clinical grounds he felt justified in distinguishing this disease group from ordinary xanthoma, and he characterized the group by the relative smallness of the lesions, at most the size of a hazelnut, sometimes that of a millet seed, by the wide dissemination over the body without any sites of predilection, by the reddish color and by the absence of any connection with the tendons or their sheaths.

The condition in our case showed many points of resemblance to a typical lesion of xanthoma in an intermediate stage of development. While typical large polyhedral xanthoma cells were not present, they were represented by histiocytes which like them had a poorly defined foamy cytoplasm which contained sudanophil droplets and anisotropic crystals. Lipoids were present in the basal layer in our case, as

5. Jaffé, R. H.: Reticulo-Endothelial System, Arch. Path. **4**:45 (July) 1927.

6. Chester, W., and Kugel, J. H.: Lipoidgranulomatosis (Type, Hand-Schüller-Christian): Report of a Case, Arch. Path. **14**:595 (Nov.) 1932.

7. Arzt: Beiträge zur Xanthom (Xanthomatosis) Frage, Arch. f. Dermat. u. Syph. **126**:809, 1918.

described in a typical case of xanthoma by Pautrier.[8] The cellular infiltrate extended from just beneath the epidermis down to the hypoderm, and in places it lay in definite relationship to the blood vessels.

The lesion differs from typical xanthoma histologically in the presence of inflammatory changes. The vascularity of the tissue and the profuse lymphocytic and fibroblastic infiltration speak for a granulomatous process. These changes are undoubtedly a part of a gradual fibrosis and spontaneous involution of the lesion, a fact borne out often clinically, since the lesions disappear spontaneously.

Since the condition in our case apparently should be classed as the juvenile type of xanthoma, with the cells infiltrated by lipoids identified as histiocytes of the reticulo-endothelial system rather than endothelial cells, it is pertinent to inquire whether the cases described by McDonagh, Wise and Jacobi and Grund should be classified as instances of endothelioma. We have not had an opportunity to study sections taken in any of the other cases for comparison, but we believe that the subject of cutaneous endothelioma is so unsettled that at least some of the cases may prove to be cases of xanthoma.

To quote Ewing:[9] "In no department has the doctrine of endothelioma suffered such violent transformation as in the field of tumors of the skin. Here several quite distinct neoplasms have gradually acquired a wide or general acceptance as endothelioma, only to lose their claims for recognition in this category through the more careful studies of critical observers." As examples of this he mentioned the lymphangioma tuberosum multiplex of Kaposi, the endothelioma of the skin of Brown and others and the soft nevus with its derivatives. He stated that with the elimination of these groups neither Darier nor Unna would admit the existence of genuine endotheliomas of the skin. With regard to the group under discussion he commented: "There is a group of tumors of the skin in children or adults which probably represent phases of regression, or rarely of slight or even active neoplastic growth of endothelial cells of capillary nevi. Wise describes two cases at length but does not clearly connect them with capillary nevi, nor distinguish them from pigmented moles."

Ewing urged that the diagnosis of endothelioma be accepted only when evidence is clear and conclusive, as otherwise the group will continue to represent the resting place of miscellaneous tumors, on which the data and study have been inadequate.

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8. Pautrier, L. M.: Dermo-Epidermic Interchanges as Controlled by Study of Melanic Pigment, Esters of Cholesterol (Xanthoma) and Hemosiderin (Schamberg's Disease), Arch. Dermat. & Syph. **17**:1 (Jan.) 1928.

9. Ewing, J.: Neoplastic Diseases, ed. 3, Philadelphia, W. B. Saunders Company, 1928, p. 361.

An example of this confusion recently came to our attention in a case in which a tumor of the eyelid was diagnosed as an endothelioma by a competent pathologist. Further study by another equally skilled pathologist showed the tumor to be derived from the sweat glands.

CONCLUSIONS

We have reported a case of the rare type of lesion previously reported as nevoxanthoma-endothelioma. While not prepared to deny the possibility of endothelioma existing in some of the cases reported, our experience with this case leads us to believe that careful study of all cases of this type is indicated. We believe with Arzt that the lesions will probably all prove eventually to belong to the group of juvenile xanthomas.

TRICHOPHYTIN AND ALLERGY TO TRICHOPHYTIN

I. COMPARISON OF CUTANEOUS RESPONSES TO TWO STANDARD PREPARATIONS OF TRICHOPHYTIN AND TO DERMATOMYCOL (DA FONSECA AND DE ARÊA LEÃO)

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Clinical and laboratory studies in trichophytin allergy, including experiments in sensitization, hyposensitization and immunization, have received attention for three reasons: (1) because of the influence of these phenomena on the course of mycotic infections, including their possible therapeutic effect on certain fungous diseases; (2) because of their general significance in the theoretical conceptions of immune biology, and (3) because trichophytin belongs to a large and universally important group of allergens of practical significance in infectious diseases (e. g., tuberculin, luetin, the Frei vaccine, leprolin, mallein, sporotrichin, oidiomycin and tularemia vaccine).

For the two reasons last mentioned, studies and experiments with trichophytin merit attention far beyond that which might be accorded them if their results were applicable only to fungous diseases. There are such close analogies, particularly between trichophytin and tuberculin allergy, that it may be stated that what is done with trichophytin may usually be repeated with tuberculin and that any method capable of influencing the allergic reaction of the skin to trichophytin and the course of trichophytic disease will, in all probability, influence the allergic reaction of the skin to tuberculin and the course of tuberculosis of the skin—and perhaps even of other organs—in a similar or identical fashion (Bloch,[1] Jadassohn[2] and Vogt[3]). For these reasons, modern

From the Skin and Cancer Unit, the New York Post-Graduate Medical School and Hospital, service of Dr. Fred Wise, Dr. George M. MacKee, Director.

1. Bloch, B.: Allgemeine und experimentelle Biologie der durch Hyphomyceten erzeugte Dermatomykosen, in Jadassohn, J.: Handbuch der Haut- und Geschlechtskrankheiten, Berlin, Julius Springer, 1928, vol. 11, p. 300; Die Trichophytide, ibid., p. 565.

(Footnotes continued on next page)

dermatologists have never ceased to study the action and effects of trichophytin from every possible point of view and with every known clinical and laboratory method.

Many observers have sought to employ trichophytin in the treatment of the direct primary fungous infections of the skin and hair, with more or less success—usually by means of subcutaneous, intramuscular or intravenous injections of various extracts (Bloch [1]).

Sulzberger and Wise [4] employed repeated intracutaneous injections in the attempt to benefit not fungous infections but the fungus-free secondary dermatophytids, which are universally acknowledged to be based on hypersensitivity of the skin to fungus products.[1]

This recent study demonstrated that repeated intracutaneous injections of trichophytin regularly succeed in reducing the sensitivity of the skin to trichophytin, so that, as a rule, a skin which originally reacts strongly to intracutaneous injections of high dilutions can eventually be brought to tolerate higher concentrations. This hyposensitization was sometimes accompanied by disappearance or marked improvement of the presumptive dermatophytids from which the patient suffered. But in many instances the dermatosis did not improve concomitantly with the reduction in the sensitivity of the skin to trichophytin, and in still other, but exceptional, cases the cutaneous sensitivity was not reduced by this method.

Van Dyck, Kingsbury, Throne and Myers,[5] working at about the same time, obtained remarkably effective therapeutic results through the employment of approximately the same method as that outlined by Sulzberger and Wise. These investigators made no mention of the regular reduction in cutaneous sensitivity to tests with trichophytin.

Both the European and the American literature contain many more recent reports on the employment of hyposensitization with trichophytin (and oidiomycin) in the treatment of superficial fungous diseases. The methods and extracts used in all these studies have been similar to those described in the original reports, although there have been variations in dosage and technic, and in some instances autogenous trichophytin has been employed in the place of stock preparations of trichophytin. The

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2. Jadassohn, W.: Immunbiologie der Haut, in Jadassohn, J.: Handbuch der Haut- und Geschlechtskrankheiten, Berlin, Julius Springer, 1932, vol. 2.

3. Vogt, R.: Tuberkulose der Haut, in Jadassohn, J.: Handbuch der Haut- und Geschlechtskrankheiten, Berlin, Julius Springer, 1931, vol. 10, pt. 1.

4. Sulzberger, M. B., and Wise, F.: Ringworm and Trichophytin, J. A. M. A. **99**:1759 (Nov. 19) 1932.

5. Van Dyck, L. C.; Kingsbury, J.; Throne, B., and Myers, C. N.: The Use of Trichophytin as a Diagnostic and Therapeutic Agent in Mycotic Infections of the Skin, New York State J. Med. **31**:611, 1931.

majority of the more recent investigators reported a fairly high percentage of favorable results with this therapy (Pennington,[6] Scholz,[7] Robinson and Grauer[8]). In reports in which they differed from previous investigators, Traub and Tolmach[9] claimed cures in only 14 of the 135 cases in which treatment with trichophytin alone was employed. The last-named authors concluded that the method was not superior to older, nonimmunologic forms of therapy.

The present status of therapeutic trichophytin hyposensitization may still be summarized approximately as it was originally stated by Sulzberger and Wise; i. e., repeated intracutaneous injections of gradually increasing quantities (concentrations) of trichophytin bring about hyposensitization of the skin in the majority of cases. This statement has been confirmed by all subsequent observers, including Traub and Tolmach. While this hyposensitization is not necessarily always successful, the principle of active trichophytin immunization is, nevertheless, established. However, "the method [repeated intracutaneous injection of ordinary trichophytin in the therapy of presumptive ids] is by no means suitable for general treatment. At present we can recommend it only as an ultimate measure in severe and refractory cases occurring in cooperative patients. Nevertheless, the results do not discourage further attempts in this direction. Modifications of our methods may improve the results."[4]

In view of the aforementioned observations, all new modifications of methods for trichophytin hyposensitization are worthy of careful study.

One possible modification applies to the employment of modified and deproteinized or otherwise denatured extracts. The first steps in this direction were taken by Bloch, Labouchère and Schaaf.[10] These observ-

6. Pennington, Edna S.: Trichophytin and Monilia Extracts in Allergic Dermatoses, J. Allergy **7**:54, 1935.

7. Scholz, Ursula: Epidermophytid and Epidermophytin, in Year Book of Dermatology and Syphilology, Chicago, The Year Book Publishers, Inc., 1934, p. 24; 1935, p. 20.

8. Robinson, G. H., and Grauer, R. C.: Use of Autogenous Fungus Extracts in the Treatment of Mycotic Infections, Arch. Dermat. & Syph. **32**:787 (Nov.) 1935.

9. Traub, E. F., and Tolmach, J. A.: Dermatophytosis: Its Treatment with Trichophytin, Arch. Dermat. & Syph. **32**:413 (Sept.) 1935. Dermatophytosis, Tr. Internat. Cong. Dermat., 1935, p. 714.

10. Bloch, B.; Labouchère, A., and Schaaf, F.: Versuch einer chemischen Charakterisierung und Reindarstellung des Trichophytins, Arch. f. Dermat. u. Syph. **148**:413, 1935.

ers succeeded in isolating from ordinary trichophytin a substance which they characterized as a starchlike polysaccharide, in which no traces of protein were demonstrable, although nitrogen was still present. This polysaccharide was proved to be an active and specific principle of trichophytin by the following observations:

1. The polysaccharide regularly produced cutaneous reactions in persons with cutaneous sensitivity to the ordinary full trichophytin and no reactions in persons who did not react to trichophytin.

2. Even when dilutions were injected, the polysaccharide still produced reactions of the skin of a strength equivalent to that of reactions following the injection of much higher concentrations of the complete trichophytin.

3. The polysaccharide produced specific cutaneous reactions in guinea-pigs which had been infected with fungi of the Trichophyton group.

4. The polysaccharide elicited the Schultz-Dale reaction in the isolated uterine strip of guinea-pigs infected with fungi several months previously.

5. The polysaccharide sensitized noninfected guinea-pigs and rendered the uterine strip sensitive to the polysaccharide in the Schultz-Dale test. (Bloch, Labouchère and Schaaf [10] and Jadassohn, Schaaf and Sulzberger [11]).

Da Fonseca, de Arêa Leão and their collaborators [12] recently reported their experience with another modification of trichophytin. These authors, employing the method of Jausion and Sohier (1929),[12a] prepared a "clasovaccine" from over three hundred strains of fungi of the so-called Trichophyton group (Achorion, Trichophyton, Epidermophyton and Microsporon). These fungi have been shown to be immunologically related to one another (Bloch,[1] Jadassohn [2] and Sulzberger [13]) but immunologically different from fungi of the Monilia group (Sulzberger [13] and Kerr, Pascher and Sulzberger [14]).

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11. Jadassohn, W.; Schaaf, F., and Sulzberger, M. B.: Der Schultz-Dalesche Versuch mit Trichophytin, Klin. Wchnschr. **11**:857, 1932.

12. da Fonseca, O., Jr., and de Arêa Leão, A. E.: Vaccinotherapia das epidermophyceas e das tinhas tonsurantes, Rev. méd.-cir. do Brasil **39**:269 (Aug.) 1931. da Fonseca, O., Jr.: Allergides mycosicas, ibid. **42**:287 (Sept.-Oct.) 1934. Motta, J.: Allergides mycosicas, Ann. brasil. de dermat. y syph. **8**:1, 1933.

12a. Jausion, H., and Sohier, R.: Les claso-vaccins, Presse méd. **38**:621, 1930.

13. Sulzberger, M. B.: Experiments in Passive Transference of Urticarial Hypersensitiveness to Fungous Extracts: Immunological Grouping of Trichophytons and Monilia, J. Immunol. **23**:73 (July) 1932.

14. Kerr, P. S.; Pascher, F., and Sulzberger, M. B.: Monilia and Trichophyton Extracts: Their Combined Use in Eczematous Ringworm (Dermatophytosis and Dermatophytids), J. Allergy **5**:288, 1934.

The claso-extract prepared by Jausion and Sohier and by da Fonseca and his co-workers is said to be efficacious therapeutically for many kinds of fungous diseases of the skin, nails and hair, including even infection of the scalp due to Microsporon Audouini, and to produce no reaction in patients hypersensitive to ordinary trichophytin.

The present study is devoted to the demonstration of the last point, which is of fundamental immunologic significance, for demonstration of specific therapeutic effects achieved through injection of an extract no longer capable of producing a reaction in hypersensitive persons would be contrary to immunologic axioms and would necessitate the adoption of new concepts in the theory and practice of trichophytin desensitization.

In the study of this problem we performed intracutaneous tests on a series of over 200 patients.

EXPERIMENTAL INVESTIGATION

Each of the following preparations was injected intracutaneously at the same visit, as superficially as possible, in each of over 200 patients: (1) 0.1 cc. of a 1:30 dilution of stock trichophytin from the Lederle Laboratories, Inc.,[15] prepared in the usual way from one strain of Trichophyton interdigitale (Epidermophyton interdigitale); (2) 0.1 cc. of a 1:100 dilution of stock Metz trichophytin[15] prepared from Trichophyton gypseum, Trichophyton cerebriforme, Trichophyton microides, Trichophyton rosaceum, Trichophyton violaceum and Trichophyton crateriforme—six strains; (3) 0.1 cc. (regular dose) of the undiluted trichophytin (dermatomycol) prepared by the method of da Fonseca and de Arêa Leão, a denatured "clasotrichophytin" (clasovaccine of Jausion and Sohier), specifically prepared from over three hundred strains of fungi,[16] and (4) 0.1 cc. of a 1:100 dilution of stock oidiomycin from the Lederle Laboratories, Inc. (prepared in the usual way from a pathogenic strain of Monilia albicans).

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15. Trichophyton extract (Metz trichophytin) was the subject of a preliminary report by the Council of Pharmacy and Chemistry of the American Medical Association (J. A. M. A. **99**:1779 [Nov. 19] 1932). This report stated that "since there appears to be a disagreement as to the value of Trichophyton Extract (Metz trichophytin), the Council postponed consideration of the products to await the development of further clinical evidence from American dermatologists."

Trichophytin (Lederle Laboratories, Inc.) and trichophyton extract polyvalent-dermatomycol (Laboratorio Brasileiro de Chimioterapia, Ltda., Rio de Janeiro, Brazil), are now before the Council. A preliminary report will be published on the Lederle product. Consideration of dermatomycol has been postponed to allow the manufacturer to collect further clinical data with regard to this product.

16. Ernst Bischoff Co., Inc., New York, placed the dermatomycol at our disposal.

The reactions to these preparations were of the usual tuberculin type and were read forty-eight hours after the injections.

The results in the first 103 cases in our series are submitted in tables 1 and 2. In over 100 additional cases the results obtained were almost identical with those presented in the tables. For this reason, the results in the second series are not tabulated in this paper.

TABLE 1.—*Reactions After Forty-Eight Hours to Intradermal Injections of Fungus Extracts in 40 Patients with Tinea*

Patient	Lederle Trichophytin, 1:30 Dilution	Metz Trichophytin, 1:100 Dilution	Dermatomycol, Undiluted	Lederle Oidiomycin, 1:100 Dilution
B. B.	0	0	0	++++
S. B.	+	+	0	±
E. C.	±	±	0	±
A. C.	++	++	+	++++
R. G.	++	++	±	++
B. G.	0	++	0	++
E. G.	+++	++++	0	++++
W. H.	±			+++
J. J.	+	+	+	++
S. J.	0	++	0	++
R. J.	0	0	0	++
A. K.	0	0	0	±
A. K.	+	±	±	+
S. K.	++	++	0	++
A. M.	0	0	0	0
R. M.	+	0	0	±
H. N.	+	+	+	+
S. P.	0	0	0	±
M. R.	0	0	0	++
R.	±	++	0	0
D. R.	0	0	0	+
T. R.	0	0	0	++
L. R.	±	±	0	±
S. R.	0	0	0	++
S. A.	0	0	0	+
A. A.	0	+	++	±
J. C.	+	++	+++	++++
M. F.	+	++	+	+
P. G.	0	+	±	++
A. G.	++	+++	±	++++
H. H.	0	0	0	0
T. J.	+	+++	+++	+
C. K.	0	0	0	0
F. K.	+	++		+
M. L.	++	++	0	+++
B. M.	+	++	+	+
P. R.	0	0	0	0
A. R.	0	0		±
E. R.	0	0	0	+++
E. T.	0	0	0	+++

* In this table and in the accompanying table, 0 indicates a negative reaction; ±, an area of slight erythema approximately 0.5 cm. in diameter; +, an area of reaction from 0.5 to 1 cm. in diameter; ++, an area of reaction from 1 to 1.5 cm. in diameter; +++, an area of reaction of from 1.5 to 2 cm. in diameter, and ++++, an elevated area of reaction of 2 cm. or more.

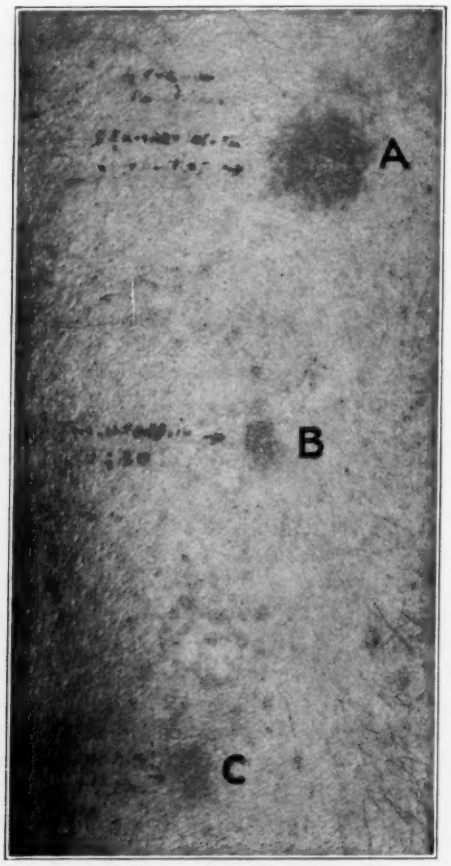
TABLE 2.—*Reactions After Forty-Eight Hours to Intradermal Injections of Fungus Extracts in 63 Patients in Whom Tinea Was not Found*

Patient	Lederle Trichophytin, 1:30 Dilution	Metz Trichophytin, 1:100 Dilution	Dermatomycol, Undiluted	Lederle Oidiomycin, 1:100 Dilution
S. A.	0	±	0	+++
A. A.	±	±	?	++
B. B.	+	+	0	0
S. B.	0	±	0	++++
L. C.	±	+	+	++++
H. D.	0	0	0	++
E. D.	±	±	0	±
H. E.	0	0	0	+++
T. E.	+	++	0	++++
A. E.	+++	+++	+	+++
A. F.	±	+	+	++
I. F.	+++	+++	±	±
D. H.	0	+	0	+
F. H.	0	+	0	+
P. K.	0	0	0	++
T. L.	0	±	0	0
J. L.	±	0	0	++
J. M.	0	0	0	+++
M. M.	0	0	0	+++
E. M.	+	±	0	+++
B. M.	0	0	0	+
A. N.	0	0	0	0
A. O.	±	±	±	+
D. P.	0	±	0	±
C. P.	0	0	0	+
I. P.	0	0	0	++
V. R.	+	++	0	+
R. R.	0	±	0	+++
I. S.	0	0	0	++++
A. A.	+	±	±	0
R. B.	±	±	0	++
J. B.	0	0	0	±
J. B.	++	+++	+	+++
B. B.	0	±	0	++++
I. B.	0	0	0	0
W. C.	+	+	±	++
R. C.	0	0	0	+++
J. C.	+	±	±	++++
G. F.	0		0	0
F. G.	0	+	0	++++
S. G.	+	+	+	++++
A. G.	++	++	±	++++
H. J.	0	0	0	++
M. K.	+	±	0	++++
R. K.	0	0	0	++++
J. K.	0	0	0	+
F. K.	±	?	—	—
B. K.	++	++	±	++
S. L.	++	++	±	+
C. M.	0	0	0	0
N. M.	0	0	0	+
B. M.	0	0	0	++
E. M.	0	0	0	0
F. M.	0	0	0	0
C. N.	0	0	0	0
B. P.	0	++	0	+++
A. P.	0	0	0	++++
S. R.	0	0	0	+++
L. R.	0	0	0	++
W. R.	0	0	0	0
E. S.	0	0	0	0
E. S.	0	0	0	++
S. S.	0	0	0	0

Analysis of our findings yields the following facts:

1. The Brazilian product, dermatomycol, elicited positive cutaneous responses of the tuberculin type in over 39 per cent of patients sensitive to ordinary trichophytins.

2. The reactions to dermatomycol were frequently less strong than the reaction to the 1:30 dilution of Lederle trichophytin or to the 1:100 dilution of Metz trichophytin.



Photograph showing reactions of the tuberculin type at the end of forty-eight hours to (*A*) dermatomycol (undiluted, regular dose), (*B*) old Lederle trichophytin (1:30 dilution) and (*C*) new Lederle trichophytin (1:30 dilution), in one of the exceptional cases in which dermatomycol elicited a stronger response than trichophytin. The experiment was repeated with identical results.

3. The reactions to dermatomycol, while roughly paralleling those to the other two trichophytins, showed, like these, no parallelism to the reactions to oidiomycin.

4. Occasionally (in 5 instances), the reaction to dermatomycol was definitely stronger than the reaction to either of the other two trichophytins (for example, patients A. A. and J. C. in tables 1 and 2 and the figure).

5. In no instance did dermatomycol produce a cutaneous reaction in a person who did not react to one or both of the ordinary trichophytins.

COMMENT AND SUMMARY

We report a comparative study of cutaneous reactions of the tuberculin type to Lederle trichophytin prepared from one strain of T. interdigitale, to Metz trichophytin prepared from six strains of fungi of the Trichophyton group and to dermatomycol, a Brazilian trichophytin said to be denatured and to be prepared as a clasovaccine (Jausion and Sohier) from over three hundred strains of fungi of the Trichophyton group.

In our series it was shown that dermatomycol possesses the ability to elicit positive cutaneous reactions to some degree paralleling the reactions to the two ordinary trichophytins employed. It may be concluded that dermatomycol contains at least one of the active principles which elicit the specific cutaneous reactions to trichophytin in persons sensitized by previous exposure to fungi of this group.

In our series the cutaneous reactions to dermatomycol were generally weaker than the reactions to the two other trichophytins. However, in exceptional cases the intensity of the reaction to dermatomycol far surpassed the intensity of the reaction to the other two trichophytins.

Jadassohn, Schaaf and Laetsch [17] showed that fungi of the Trichophyton, Epidermophyton and Achorion species contain not only a general common excitant but an additional species-specific excitant not possessed by the other members of the group. It is therefore apparent that dermatomycol may contain the sum of the small amounts of the common excitant contributed by each of the individual species represented and, in addition, small quantities of several species-specific antigens not present in the monovalent Lederle trichophytin or in the hexavalent Metz trichophytin. A patient who is extremely sensitive to one of the species-specific excitants, which may be presumed to be present in dermatomycol and absent in the Lederle trichophytin and the Metz trichophytin, obviously reacts much more strongly to dermatomycol than to the other two preparations. This may be the explanation of the much stronger reaction to dermatomycol occasionally observed.

However, such additional species-specific excitants, if present in dermatomycol, are necessarily in high dilution.

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17. Jadassohn, W.; Schaaf, F., and Laetsch, W.: Antigenanalytische Untersuchungen an Trichophytinen, Arch. f. Dermat u. Syph. **171**:461, 1935.

It is noteworthy that in our series dermatomycol elicited no positive reaction in any person who failed to react to one or both of the other trichophytins. This, in our opinion, demonstrates that specific sensitization to the common factor in the Trichophyton group is the almost universal and important occurrence; however, as already stated, an additional sensitivity to the species-specific factors probably exists. It is to be noted that neither dermatomycol nor either of the two other trichophytins produced reactions paralleling the responses to oidiomycin. This again demonstrates that the Trichophyta and the Moniliae belong to different immunologic groups of fungi, each capable of producing its independent specific hypersensitivity.

So far as factors eliciting cutaneous reactions are concerned, it may be stated that the new Brazilian clasotrichophytin acts approximately as may be expected of a high dilution of ordinary polyvalent trichophytin and that it must still contain some skin test principle. Since it is claimed that the activity of this extract is independent of its content of native protein, it is possible that the skin test principle of dermatomycol may be similar to (or even identical with) the specific protein-free trichophytin polysaccharide of Bloch, Labouchère and Schaaf.

It is obvious that our present experiments can have no bearing on the question of the diagnostic or therapeutic value of dermatomycol or of the other trichophytins. Our results demonstrate, however, that dermatomycol still contains some active specific skin test principle of trichophytin. The therapeutic employment of the Brazilian clasotrichophytin thus embodies no radical departure from recognized immunologic procedure.[18]

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18. Our studies by no means exclude the theoretical possibility that the desensitizing or immunizing agent in trichophytin may be a substance different and distinct from the factor eliciting the cutaneous reaction, nor do they exclude the correlated possibility that, in contrast to ordinary trichophytins, dermatomycol may have a high content of immunizing factor and yet be low in the skin test factor. This consideration is, however, still hypothetic, although distinctly tenable in view of recent fundamental immunologic experiments. It must be remembered that Jadassohn and Schaaf (Arch. f. Dermat. u. Syph. **170**:33, 1934) demonstrated that the uterus of a guinea-pig sensitized to diazo-atoxyl protein, when treated with diazo-atoxylnaphthol, does not contract. However, the treatment with diazo-atoxylnaphthol specifically desensitizes the uterus, so that it does not contract even when subsequently brought into contact with the sensitizing substance (diazo-atoxyl protein). Thus, an entirely new immunologic substance was demonstrated, a hapten capable of specifically desensitizing but not of eliciting reaction. That such a nonreaction-eliciting but desensitizing hapten may exist in some trichophytins appears more likely from the results of recent experiments of Jadassohn, Schaaf and Laetsch.[17] These authors have demonstrated that the polysaccharide of T. gypseum trichophytin contains a substance which desensitizes the uterus of

(Footnote continued on next page)

Therapy with the use of dermatomycol seems, therefore, to be based on the same principles as those on which previous attempts at specific treatment have been founded, i. e., on hyposensitization by means of repeated injections of increasing amounts of specific substance.

It is to be hoped, nevertheless, that the new method of preparation of the fungus extract may represent a modification leading to the very necessary improvement in general therapeutic effects. Studies dealing with this problem are now in progress.

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the guinea-pig to a certain substance in the polysaccharide of Achorion quinckeanum trichophytin but that this desensitizing substance found in the gypseum fungus cannot itself elicit reactions.

These questions are obviously of far reaching significance not only in theory but in practice, for the findings may make it possible perhaps to isolate allergen fractions which desensitize without causing reactions. Whether the clasotricho-phytin dermatomycol actually contains such desensitizing but nonreaction-eliciting haptens must be the object of further study.

SODIUM THIOSULFATE IN TREATMENT OF SCABIES

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SAN FRANCISCO

The therapy of scabies for many years has consisted of ointments containing sulfur, either alone or in combination with other drugs. The therapeutic action of sulfur apparently is dependent on the production of hydrogen sulfide, which is lethal to Acarus and its ova. Since its introduction by Ehlers [1] in 1917, the so-called Danish treatment, which consists of the application of an ointment containing a combination of the high sulfides of potassium, has been more or less the standard therapy and for the most part it has been effective. Greenwood,[2] however, has reported failure to alleviate the symptoms in 3.5 per cent of the patients treated by this method, as well as the occurrence of sulfur dermatitis in 2 per cent of the patients following the use of such an ointment. The disagreeable odor of sulfur and the necessity of keeping the body covered with ointment for twenty-four hours or longer have made the treatment of scabies somewhat difficult.

Recently, Ravaut and Mahieu [3] described the successful treatment of scabies by the precipitation of colloidal sulfur on the skin through the interaction of sodium thiosulfate and an acid. The treatment is carried out as follows: The patient is directed to take a soap and water bath. After he is thoroughly dry, a 40 per cent aqueous solution of sodium thiosulfate is applied over the entire body except the head and face; particular attention is paid to the areas between the fingers, flexural surfaces of the wrists, breasts, abdomen, buttocks, thighs and external genitalia. Fifteen minutes later 4 per cent hydrochloric acid is applied in a similar way, and one hour later the applications are repeated in the same order. The procedure is repeated the next day; on the following day the patient again bathes and changes to fresh clothing. All bed linen, sleeping garments and clothing previously used are ster-

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1. Ehlers, E.: Om fnatbehandling med unguentum hepatis sulphuris, Ugesk. f. læger **83**:480 (April 7) 1921.

2. Greenwood, A.: The Danish Treatment of Scabies, J. A. M. A. **82**:466 (Feb. 9) 1924.

3. Ravaut, P., and Mahieu, M.: L'hyposulfite de soude dans le traitement de la gale et de diverses affections cutanées, Bull. Soc. franç. de dermat. et syph. **41**:135 (Jan.) 1934.

ilized by boiling for five minutes. As the solutions are stable, they may be made up in large quantities and dispensed as needed. Four ounces (118.29 cc.) of each solution is sufficient to carry out the treatment.

We used sodium thiosulfate in treating fifty patients with scabetic infestations of all degrees of severity. As a control, fifty patients were treated with an ointment prepared in the manner described in Greenwood's [2] article. The diagnosis was made on the basis of the morphology and distribution of the lesions, the presence of burrows and the history of nocturnal itching. The ages of the patients who were treated by the use of sodium thiosulfate varied from 7 months to 62 years. On examination of the patients in this group one week after completion of the treatment, all were found to be free from evidence of scabies, although one patient returned with a relapse or a reinfection five weeks after the treatment, having been free from lesions during the intervening period. Contrary to instructions, five patients repeated the regimen of treatment two times and one four times before returning for examination. In the latter instance a mild sulfur dermatitis occurred after the eighth application of the solutions. No other dermatitic reactions occurred.

The ages of the patients treated with the ointment varied from 1 year to 73 years. Thirty-one of the patients showed no evidence of scabies after one application of the ointment. For eleven, two applications, and for three, three applications, were necessary to effect a cure. For one patient four applications of the ointment were required before a cure was attained. For four patients treatment was not effective, although two of them used the treatment only once and one twice and one carried out the routine three times without success. Ten of the patients acquired a sulfur dermatitis, six after one application and four after two applications of the ointment.

With the exception of the slight odor of sulfur detectable for about fifteen minutes after the application of the sodium thiosulfate and hydrochloric acid solutions, patients were not in any way inconvenienced by the therapy. Patients who had been previously treated with ointments of various kinds containing a sulfur expressed a decided preference for the therapy with sodium thiosulfate.

CONCLUSIONS

The precipitation of colloidal sulfur on the skin by the interaction of a 40 per cent aqueous solution of sodium thiosulfate and a 4 per cent solution of hydrochloric acid provides a simple, effective and economical method of treating scabetic infestations. In our experience, this method, as compared with the so-called Danish method, resulted in a higher percentage of cures with a considerably lower incidence of dermatitic reactions.

ECZEMA DUE TO DYED CLOTHING

REPORT OF FIFTEEN CASES

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The clinical picture of the type of eczema to be described here is based on a number of cases studied during the past year in the dermatologic department of the Finsen Institute.

The points which first suggested to us that we were dealing with eczema of unusual origin were the localization of the disorder, its almost exclusive occurrence in women and, finally, the information given by the patients.

In a few of these cases the patients said of their own accord that they thought the cutaneous trouble was connected with some newly acquired clothing, as the symptoms appeared in direct chronological relation to its acquisition. Once our suspicion was aroused, we suceeded in other cases in establishing the etiology of a cutaneous disorder rather quickly from the history given by the patient.

As already mentioned, this condition was noted almost exclusively in women, being established with certainty in the case of only one man. This predominant frequency in women apparently is due not to any particular inherent disposition to this disorder but simply to the close contact between the skin and the causative agent, the dye of the clothing, which is given particularly favorable conditions for asserting its noxious properties. This point is distinctly evident from the localization of the disease in most cases to certain parts of the skin: the axillae, the bend of the elbows and the neck (in particular the lateral and posterior surfaces of the neck). The areas correspond to the places where the contact with the clothing is closest. Movements of the head or arms make the neckband or collar rub back and forth against the skin of the neck, in some cases mostly on the sides and in other cases more on the back, depending on the cut of the clothing and the shape of the neck.

In the bend of the elbows and especially in the axillae the local traumatizing effect of the rubbing of clothing is often accentuated by

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Read by Dr. Genner before the Ninth Session of the Congress of Scandinavian Dermatologists, Copenhagen, Denmark, 1935.

the presence of hyperhidrosis, which predisposes to the lesion because the dye in clothing is dissolved by sweat, making the introduction of the dye into the skin easier. When there is unusually marked axillary sweating the skin of the axillae is often discolored by dye. Besides, the noxious effect of the dye is not infrequently accentuated by the previous use of chemicals for the removal of the axillary hair or for suppression of sweating, resulting in small breaks in the skin. These various factors contribute to make the eczematous changes more marked as a rule in the axillae than elsewhere, producing a vesicular, moist type of eczema. In contrast to this the eruption on the neck or elsewhere has most often the character of a dry papular eczema. The

Fig. 1.—Eczema of the neck.

predisposing factor hyperhidrosis is in several cases supported by another factor, namely, obesity, by which both friction and perspiration are as a rule accentuated.

The significance of these factors, in particular hyperhidrosis, was stressed by the predominant occurrence of the disease in the summer months, when perspiring is more marked and, perhaps, because in summer the outer clothing is in more direct contact with the skin.

A predisposing factor of a different kind is pityriasis simplex, which was present in about half of our cases; as this condition is localized especially on the scalp and in neighboring areas, it promotes the appear-

ance of eczema on the neck and occiput. Besides occupying the areas of predilection, the eczema had in some cases a deviating localization, although a thorough examination would usually offer a satisfactory explanation. In not a few instances (cases 1, 3, 7 and 10) one or several typical localizations were present besides, and in part coincident with, an extension of the morbid process to the volar surfaces of the arms (especially the forearms), corresponding to the intimate contact

Fig. 2.—Eczema of the armpit.

of the skin with the sleeves of a blouse. In one instance (case 5) the patient realized the danger involved in wearing a certain dress but could not afford to discard it; so she tried to avoid the inconveniences by wearing underwear with long sleeves, being able thus to some extent to protect the greater part of the arms. Yet, on account of excessive sweating, the dye passed through the underwear into the axillae. It also produced eczema about each wrist, where the cuff was tight and was not separated from the skin by the protecting sleeve of the underwear.

In another case (case 12) the eczema appeared on the backs of the hands and on the volar surfaces of the forearms after the patient had washed a skirt in a solution of persil (a German washing powder the formula of which we do not know). The diffusion of the dye into the washing water explains the somewhat atypical localization of the disease in this case. The preference for the volar surfaces of the forearms and the backs of the hands was due to the greater delicacy of the skin in these areas; a similar distribution is seen in eczema of other origin, especially in occupational diseases. The skin of the palms and of the extensor surfaces of the forearms is, on the whole, tougher and therefore more resistant to noxious agents.

Among the cases of atypical localization of the lesions, it will be appropriate to mention also the case of the man (case 14). The disease developed in connection with the wearing of a new blue suit, and in

Fig. 3—Eczema at the bend of the elbow.

the absence of other portals of entrance (lining of the sleeves) the eczema localized on the radial surfaces of the wrists, where there was nothing to prevent friction between the skin and the sleeves of the coat, to the anterior surfaces of the knees and to the posterior surfaces of the legs (calves), where contact was possible because the patient wore short underwear.

Another illustrative case (7) was one in which a coat proved to be the cause of the eczema. The patient wore this coat over a sleeveless blouse, and an eczematous eruption developed in the axillae, on the back of the neck, on the arms and on the dorsal surface of the right hand. The reason the eczema failed to appear on the back of the left hand was that the patient usually wore a glove on the left hand but not on the right.

One patient (case 9) tried to protect herself against the noxious effect of a certain dress by wearing a smock under it; but, as in the

case in which the use of long-sleeved underwear was tried, the dye went through the smock into the axillae (owing to hyperhidrosis).

As to the age of the patients, this condition appears to have no affinity for persons of any particular age. However, there were no children among our patients, who were from 24 to 66 years of age.

We have mentioned the different kinds of clothing from which this cutaneous disease originated in the individual cases. As was to be expected, the localization was largely dependent on this, but the morbid process was otherwise the same in all the cases, as it was not the individual piece of clothing itself but the dye that produced the eczema. In this connection it should be mentioned that the offending clothing was as a rule made of fabric of cheap quality, which may perhaps be associated with cheap methods of dyeing or the use of dyes of inferior (more toxic) quality. This chemical aspect is indeed rather difficult to clear up, however, as manufacturers are not willing to furnish information on this particular point.

It is striking, however, that blue clothing was demonstrated in all our cases to be the noxious factor. In one case the patient said she had worn a brown dress from which the dye was coming off; but it was found that she wore blue dresses, too.

As to the time of onset of eczema after exposure to a dyed fabric, it was noteworthy that several patients showed a reaction in one day. This particular feature, however, was merely apparent, as all the cases were found to involve the possibility of sensitization which had not been noticed by the patients.

A conspicuous characteristic of the eczema in these cases was its pronounced chronicity, the duration covering, as a rule, several months after the noxious clothing had been discarded, with intermittent variations in the intensity. As a rule, the lesion was accompanied by a very annoying itching, which often persisted after the true eczematous changes had disappeared.

Our clinical observations were subsequently confirmed by the use of Jadassohn's epicutaneous test. In all fifteen cases a blue dye was supposed to be the producer of the eczema, and the results of the test were positive in nine of these cases. In two cases (cases 4 and 9) the results were negative; in three (cases 8, 10 and 13) the test was not performed, for various reasons (in one case the dress had been destroyed). But two of the five patients (cases 9 and 10) showed a positive reaction to the test for eczema with para-phenylene-di-amine. One of these patients (case 10) had previously proved hypersensitive to a dark blue taffeta dress and subsequently to a plaid blouse, and in addition she had on several occasions shown a reaction to hair dye—acute eczematous eruptions developed on the scalp. She was also hypersensitive to a dark fur collar on a coat, whereas black fox fur gave

her no discomfort. The other patient (case 9) was hypersensitive to aromatic amines, a reaction that could be ascribed only to the blue dress.

As shown in the table, some patients showed, in addition to a hypersensitiveness to the dye of a certain article of clothing, eczematous reactions to dyes in pure form (para-phenylene-di-amine, paramidophenol, amino-azotoluene). It may be that the sensitization in some of the cases had been brought about not through the dye of a dress, but, for example, through a previous application of some dye to the eyebrows or hair; also the reverse would seem conceivable in other cases.

This common reaction to closely related chemical compounds, group hypersensitiveness, is really not remarkable; but several of our patients showed eczematous reactions to tests with substances of an entirely different nature. Thus, one patient (case 12) showed a positive eczematous reaction to the dye in a blue fabric (unwashed remnant of this fabric) and also to persil. Another patient (case 6) gave a positive reaction to mercury bichloride (previously eczema had developed after the use of sublimated vinegar) and to pinene (originating from the use of an irritating phenol-mercury plaster). One patient (case 7) gave positive reactions to tar derived from coal as well as from wood, the hypersensitiveness probably having been acquired during treatment with these substances. Another patient (case 9) was hypersensitive to primula (previously having had primula eczema); and another patient (case 10) was hypersensitive to mercury bichloride also. Two patients (cases 5 and 14) showed late reactions to paramidophenol and to primula; i. e., these patients were sensitized through the epicutaneous test. These findings as well as the hypersensitiveness of several patients to different chemical substances suggest that in cases of eczema from dyed clothing the patients are particularly easy to sensitize.

It is also in keeping with the aforementioned chronicity of the disease that the reaction produced by the cutaneous test often persisted for a long time; in one instance the eczematous changes after an epicutaneous test persisted for six months.

Among the complications we found not infrequently axillary hidrosadenitis, a condition which is often present in patients with eczema of other origin, especially after employment of antihidrotics or depilatories. Eczema of this type must be taken into consideration in making a differential diagnosis if the condition is localized in the axillae alone. Of course, if there is atypical localization of the disease, other forms of eczema also should be considered, for example, eczema of the neck due to the wearing of a fur collar. The possibility of mycosis is also to be considered in some cases, especially when the eczema is localized chiefly in the axillae. With this possibility in view, as shown in the table, a trichophytin test was performed in most of our cases, and a negative reaction was obtained in 70 per cent of the cases. For that

Case	Sex	Age, Years	Sites of Predilection: Axillae	Neck	Bend of Elbows	Other Localization	Source of Noxious Effect	Eczema Tests: Blue Fabrics	Dyes	Other Eczematogenic Substances	Reaction to Trichophytin Test
1	F	25	+	+	+ (right)	Scattered on forearms	Blue jumper	+	—	.....	+ (10 mm.)
2	F	24	+	+	+	.....	Blue blouse	+	Paramidophenol	.....	—
3	F	58	+	+	+	Volar surfaces of forearms	Blue dress	+	.....	.....	—
4	F	66	+	+	+	.....	Brown or blue dress	—	Paramidophenol	.....	—
5	F	54	+	+	+	Volar surfaces of wrists	Blue sweater and blue dress	+	Paramidophenol (late reaction)	Resorcinol	—
6	F	57	—	+	—	Arms and shoulders	Blue dress	+	.....	Mercury bichloride; pinene	—
7	F	56	+	+	—	Forearms and dorsal surface of right hand	Blue coat	+	.....	Coal tar; wood tar	+ (8 mm.)
8	F	30	+	+	—	.....	Blue woolen dress	No test	.....	.....	—
9	F	41	+	+	+	.....	Blue serge dress	Dress: — ? Smock: —	Para-phenylene-di-amine; paramidophenol Amino-azotoluol	Primula	—
10	F	50	+	+	+	Volar surfaces of arms	Blue taffeta dress; plaid blouse	No test	Para-phenylene-di-amine	Mercury bichloride	—
11	F	27	+	+	+ (left)	Shoulders and arms	Blue dress	+	.....	.....	—
12	F	41	+ (left)	—	—	Back of hands and fingers; lower parts of forearms	Blue dress	Unwashed fabric +	.....	Persil	+ (20 by 20 mm.)
13	F	40	—	+	+	Upper part of chest	Blue dress	No test	.....	.....	No test
14	M	37	—	—	—	Both wrists, back of legs, front of knees	Blue suit	+	.....	Primula (late reaction)	—
15	F	52	+	+	+	.....	Blue dress	+	.....	.....	—

matter, a positive reaction is not of great significance in this connection.

Finally, in a few cases there may be reason to consider the possibility that the condition is due to pityriasis simplex.

Eczema due to sensitization from dyed clothing has not attracted much attention in the literature.

A case of "dermatitis" produced by a black dress fabric was reported by Lomholt before the two hundred and thirty-ninth meeting of the Danish Dermatologic Society, on Nov. 2, 1931. The author called attention to the significance of sensitization in this respect. In this case the eruption was limited to those parts of the skin that had been in direct contact with the fabric. There were two strips of skin over the shoulder that were not involved in the process, and these areas were directly below the shoulder-straps of the patient's underwear.

Simon and Rackemann [1] have cited the history of a man in whom frequently recurrent and widely distributed eczematous lesions could be explained by hypersensitiveness to various dyes in his clothing, stockings, garters and hat band, in the upholstery of his furniture and automobile and also in his wife's dresses. He gave positive reactions to all tests with tri-phenylmethane and azo dyes.

In their monograph on eczema Blumenthal and Jaffé [2] cited two instances which illustrate the considerable eczematogenic effect of aromatic amines; in one case the eczema was elicited by blue clothing; in the other, by brown. Both patients gave positive reactions to epicutaneous tests with the fabric as well as with paramidophenol.

As we have been able within a relative brief period to observe this rather considerable number of cases, it is obvious that more attention must be paid to the possibility of dyed clothing as an eczematogenic factor.

An analysis of the individual cases—especially those of atypical involvement—illustrates strikingly how important it is to obtain a thorough history in order to determine the origin of the eczema in each case.

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1. Simon, F. A., and Rackemann, F. M.: Contact Eczema Due to Clothing, J. A. M. A. **102**:127 (Jan. 13) 1934.

2. Blumenthal, F., and Jaffé, K.: Ekzem und Idiosynkrasie, Berlin, S. Karger, 1933, p. 86.

FATAL IODODERMA

THE ELEVENTH CASE REPORTED IN THE LITERATURE

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Two important publications appeared in 1931 on the subject of fatal iododerma, one in the American literature by Eller and Fox,[1] the other in the German literature by Joffe.[2] We are indebted to these authors for calling this condition to our attention and also for their careful review of the literature.

A cutaneous eruption as a result of the ingestion of iodine occurs not infrequently, but as a general rule it disappears when this is discontinued. In some instances, however, in spite of discontinuance and treatment, the patient dies as a result of this intoxication.

Ten such fatal cases have thus far been authenticated. In each instance a definite history of ingestion of iodine, for a shorter or longer period, was obtained. The eruption which developed was bullous, pemphigoid or tumorous. Death occurred from heart failure, bronchopneumonia or edema of the lungs.

The ten cases thus far reported were as follows:

1. Wolf's[3] patient, after the ingestion of potassium iodide, had edema of her face and a papular, pustular and vesicular eruption on the skin and mucous membranes. Ulceration ensued. She died in one week of heart failure.

2. Hallopeau's[4] patient was 50 years old and suffered from heart failure and albuminuria. He received a daily dose of 1 Gm. of potassium iodide, after which lesions developed simulating pemphigus vegetans. He died in ten days.

From the dermatologic and pathologic services of the General Hospital of the City of Pittsburgh and the Pittsburgh Skin and Cancer Foundation.

1. Eller, J. J., and Fox, E. C.: Fatal Iododerma, Arch. Dermat. & Syph. **24**:745 (Nov.) 1931.

2. Joffe, M. J.: Erythema Iodicum Bullosum Haemorrhagicum with Fatal Termination, Arch. f. Dermat. u. Syph. **163**:517, 1931.

3. Wolf, cited by Joffe.[2]

4. Hallopeau, cited by Joffe.[2]

3. Russel's [5] patient had coryza, conjunctivitis and a bullous eruption of the entire body after a few days of ingestion of potassium iodide. He died in ten days, of marasmus and pneumonia.

4. Hutchinson's [6] patient was a 26 year old man who acquired large vegetating and tumorous lesions while taking potassium iodide. He died in fourteen days.

5. Canuet and Barasch's [7] patient acquired a papulopustular, bullous eruption after the first dose of potassium iodide. Later several ulcerated, vegetating lesions also developed. She died of edema of the lungs.

6. Neumann's [8] patient had tumor-like lesions on the face and extremities six days after the ingestion of potassium iodide. Later some of these lesions became ulcerative. The patient died in five weeks, of profound intoxication. At autopsy lesions similar to those on the skin were noted in the gastric mucosa.

7. Polland's [9] patient acquired a pemphigus-like eruption after the ingestion of potassium iodide. The eruption involved the upper extremities, lips, tongue, pharynx and gastric mucosa. The patient died.

8. Danel's [10] patient was a 51 year old man. Four days after iodine medication there suddenly developed a bullous and vegetating eruption which was extensive. He died of heart failure.

9. Joffe's [2] patient was a 55 year old man who was admitted to the hospital on account of syphilitic aortitis. He was given sodium iodide, and shortly after this medication there developed coryza and a rise in temperature. Two days later a blister-like eruption appeared on the lips, face and hands. Soon his entire face became edematous and covered with a pustular and bullous eruption. Hemorrhagic blisters occurred on the hands. He died in six days, of endocarditis and atheromatous changes in the large vessels.

10. Eller and Fox' [1] patient was a 31 year old man who presented a generalized eruption consisting of macules, papules, tuberculous rupioid lesions and fungating and granulomatous ulcerations. This case report was excellently worked up; careful and extensive histopathologic observations were made, and determination of the iodine content was carried out. The treatise is a classic one. The entire process lasted four months, at the end of which the patient died of bronchopneumonia and congestion of the liver, spleen and kidneys.

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5. Russel, cited by Joffe.[2]

6. Hutchinson, cited by Joffe.[2]

7. Canuet and Barasch, cited by Eller and Fox.[1]

8. Neumann, cited by Eller and Fox.[1]

9. Polland, cited by Joffe.[2]

10. Danel, cited by Eller and Fox.[1]

Recently a patient came under our observation who presented a clinical picture and microscopic and chemical changes so similar to those in the case described by Eller and Fox that the cases can be taken one for the other. This, we believe, is the eleventh case of fatal iododerma reported.

REPORT OF CASE

G. W., a 65 year old man, was admitted to the surgical dispensary of the Mercy Hospital of Pittsburgh on Aug. 10, 1934, on account of an ulcerating, granulomatous lesion on the medial surface of the left arm. Nine months before he had noticed itching about the elbow, which he scratched. A nodule formed at this site and slowly increased in size. About two months before he was admitted to the hospital, it began to break down, and ulceration set in. After that this lesion progressed markedly in size and extent.

The area was painted with tincture of iodine at the dispensary. In a few days the ulceration increased in size, and a generalized papular eruption appeared on the body. The patient was then transferred to the dermatologic service of

Fig. 1.—The original lesion on the median surface of the upper part of the arm.

Dr. George Busman, whose first impression was that he was dealing with a halogen eruption but that syphilis, sarcoma or leukemia had to be excluded as diagnostic possibilities. The serologic examination for syphilis gave negative results, and a biopsy showed the presence of a nonspecific inflammatory process, which, for the time being, excluded all other diagnostic considerations except a halogen eruption.

A history of ingestion of iodine was obtained. The patient had been taking yellow mercurous iodide for several months. At first his urine gave a negative response to tests for iodine, but later (Aug. 27, 1934) iodine was found in the urine.

Intravenous injections of sodium chloride were given, but as the patient's condition became progressively worse and as multiple ulcers developed all over his body, he was admitted to the dermatologic ward of the Mercy Hospital, where he remained for three months. There he received intravenous injections of sodium chloride and superficial roentgen treatments over the lesions. Moist dressings were kept on the patient. After two months of treatment the lesions were almost healed. Then there occurred an acute and sudden crop of new lesions. The patient was accused of taking iodides but he denied this emphatically.

On Jan. 1, 1935, he was discharged from the Mercy Hospital. He was admitted to our dermatologic service at the General Hospital of City Home and Hospitals, at Mayview, on March 26, 1935, and was observed until May 11, 1935, the date of his death. An autopsy was performed on the same day.

On the patient's admission to the hospital, the following observations were made: He was an emaciated, sick-looking man who presented about seventy

Fig. 2.—Tumorous lesions on the body on April 24, 1935.

lesions, mostly tumorous, of various sizes and in various stages of development. There were a few reddish nodules, but most of the lesions were large and formed a curious clinical picture.

The most prominent and most numerous were large, rounded tumors with central ulceration. Necrosis occurred at various times and at various levels, giving the lesions a concentric appearance. A dark brown, thick, markedly adher-

ent, rupioid-like, dry crust was present, giving the lesions a curious appearance of a rosette in bas-relief. The lesions were deeply infiltrated but were movable over the underlying muscles. An extremely offensive odor emanated from them.

Although most of the lesions were singular and discrete, there were a few which resulted from the fusion of several of them. A certain amount of ulceration was present, with the base of the ulcer very uneven and with a profuse amount of granulation.

Tumor-like lesions without ulceration were also present. They were surrounded by an area of inflammation. The tumors were yellowish-brown and had a waxy appearance.

Fig. 3.—Coalesced lesion on the back of the head on April 17, 1935.

Scars of healed lesions were present. They appeared as flat, rounded, depigmented areas surrounded by brownish pigmentation. There was no evidence in these scars of the marked amount of ulceration which was seen in the active lesions.

The eruption thus can be classified as a nodular, tumorous, ulcerative, scar-producing disease appearing as a multiform eruption only because the lesions were seen in the various stages of development.

About ten days before death, the lesions suddenly flattened out and enlarged. The encrustation became more profuse, and they lost much of their tumorous character.

On May 8 symptoms of bronchopneumonia developed, and the patient died on May 11, 1935.

Laboratory Investigations.—The urine (except for the one specimen on Aug. 27, 1934, which was positive for iodine) always gave negative results to tests for iodides.

Chemical examination of a lesion excised on April 17, 1935, was carried out by a special method at the University of Minnesota by Mr. Ralph V. White. He reported that there was 470 micrograms of iodine per kilogram of tissue. (This was twice the amount found by Eller and Fox in the patient whom they studied [case 10]).

Autopsy.—Autopsy was performed on May 11, 1935, two hours after the death of the patient. Externally the multifarious cutaneous lesions described in the patient's history and illustrated in the accompanying photographs were well shown. Many depigmented scars were evident at the sites from which the lesions had regressed. This was especially noted over the back.

In addition to the cutaneous manifestations, we found several unrelated conditions: (1) acute bilateral bronchopneumonia, (2) a small pulmonary abscess on

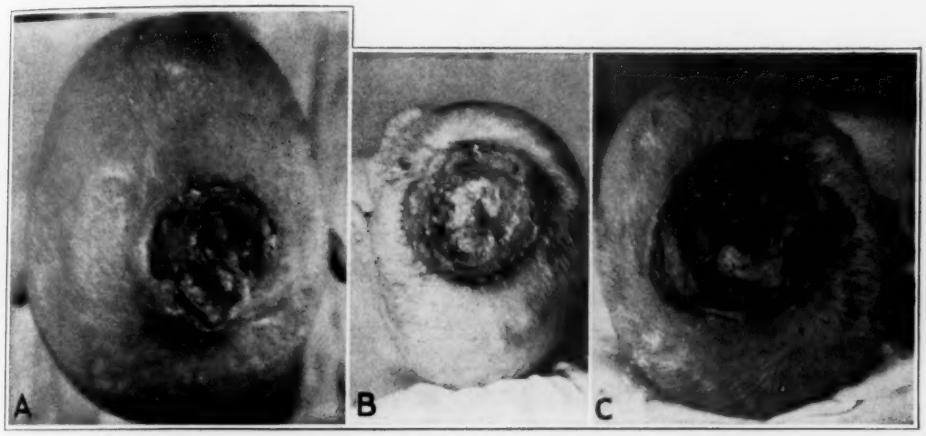

Fig. 4.—The evolution of a lesion: *A*, appearance on March 29, 1935, *B*, on April 17, 1935, and *C*, on May 11, 1935.

the right side, (3) serofibrinous pleurisy on the right side, (4) cloudy swelling of the heart, liver and kidneys, (5) a small, soft, beadlike vegetation on the curtain of the mitral valve (interpreted as a terminal phenomenon) and (6) fatty streaking and atherosclerosis of the aorta.

A number of lymph glands from the thorax and abdomen were removed. These showed nothing unusual. The marrow of the right tibia was also normal in appearance.

Biopsy.—Four sets of biopsy specimens were studied; the sections were removed on the following dates: Sept. 14, 1934, April 17, May 2 and May 11, 1935.

The first tissue examined consisted of small, shallow, ulcerated lesions, the last three of large, well advanced, tumorous and ulcerated lesions; healed lesions were also excised for histologic examination on May 2, 1935. All these sections will be considered as a group, distinguished from one another by the progression of the process rather than by the date on which the lesions were removed, for

it was apparent that certain lesions obtained at autopsy, for instance, represented an earlier stage of the process than some of the previously obtained specimens.

A definite gradation could well be traced in the several individual lesions examined, from a lymphocytic and neutrophilic infiltration of the derma, through the granulomatous changes, to the final stage of healing, with scarring in the

Fig. 5.—Appearance of the patient before autopsy, on May 11, 1935.

corium and the subcutaneous tissue, thinning of the epidermis and disappearance of the inflammatory cells.

In the earliest lesions studied the following changes were observed:

Acanthosis and destruction of the epidermis. At the site of ulceration, the epidermis was replaced by a crust composed of necrotic débris heavily studded with neutrophils. The epithelial pegs were thickened and elongated. The cutis vera was markedly thickened by edema and cellular infiltration. The majority of

the inflammatory cells were lymphocytes. These lay in large groups in the corium and the upper part of the subcutaneous tissue, arranged chiefly about capillaries and venules. There were many neutrophils in the exudate; a scattering of eosinophils was also present. Large mononuclear cells, which played such an important rôle in the more advanced lesions of granulomatous nature were not evident. Capillaries were increased in number. Certain of the vessels presented margination of leukocytes and diapedesis. The endothelial cells comprising the walls of these vessels were swollen. Proliferation of adventitial cells could not be detected.

More advanced lesions showed a definite trend toward the assumption of granulomatous characteristics. The corium and subcutaneous tissue were thickened by edema and cellular exudation. Predominating were large mononuclear cells, which might be termed histiocytes, endothelial leukocytes or adventitial cells, depending on the system of nomenclature followed. These cells were round, oval or irregularly polyhedral and possessed nuclei which were unusually vesicular and often

Fig. 6.—Low power photomicrograph, showing a normal area of dermis and epidermis; the right lower corner shows the necrotic area infiltrated with inflammatory cells.

hyperchromatic. Mitotic figures were common. With a few exceptions, these nuclear figures appeared normal. The cytoplasm was ordinarily scant, pale and homogeneous. The cells were for the most part grouped about small blood vessels and capillaries.

Certain of the lesions were ulcerated. All showed epidermal invasion by the same large mononuclear cells seen in the corium. The invading cells lay singly and in tiny groups within the basal and granular layers. Vesiculation of the epidermis was occasionally noted, although this finding was confined chiefly to older lesions. A moderate eosinophilia of the tissue was present. Although the characteristic cells lay chiefly in perivascular positions and adventitial cells not unlike these were occasionally seen, we did not feel justified in assuming that they (the characteristic cells) were of adventitial origin.

Sections of the largest and most fully developed lesions presented a similar picture with a few alterations. The previously described essential cells were

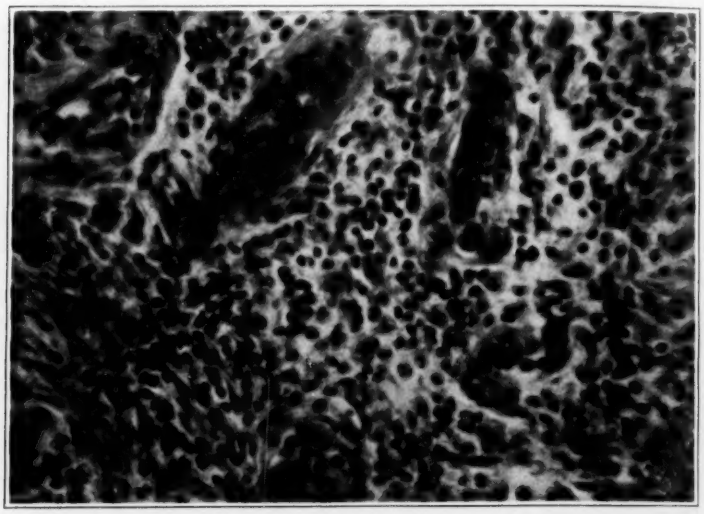

Fig. 7.—High power photomicrograph, showing blood vessels filled with leukocytes, mostly polymorphonuclear, and interstitial exudate, with numerous polymorphonuclear cells, eosinophils and occasional lymphocytes.

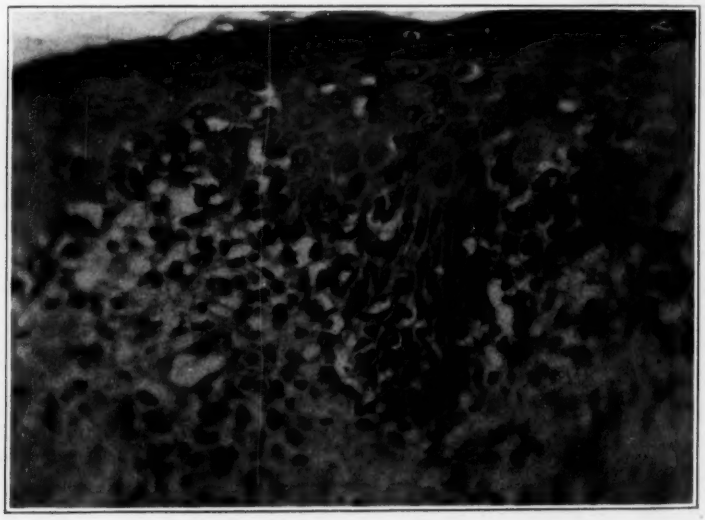

Fig. 8.—High power photomicrograph, showing epidermis and the upper part of the corium. There are intercellular and intracellular edema and early invasion of the rete by inflammatory cells.

densely packed within the corium and extended down into the subcutaneous fat. This distribution, combined with the changes produced by nuclear activity, was largely responsible for the tumor-like histologic appearance. Necrosis was more extensive than in the less advanced lesions and caused deep ulcerations. Eosinophils were numerous. A few arteries and arterioles of the subcutaneous tissue presented proliferative thickening of the intima, with marked narrowing of the lumen.

In partially healed lesions dense fibrous scarring with decrease in the number of inflammatory cells was seen. This was found directly adjacent to active granulomatous areas, with a moderately sharp transition from one to the other.

The completely healed lesions presented atrophy of the epidermis, especially involving the basal layer. There was dense fibrosis of the corium and subcutaneous tissue. Within the corium there were many macrophages containing blood pig-

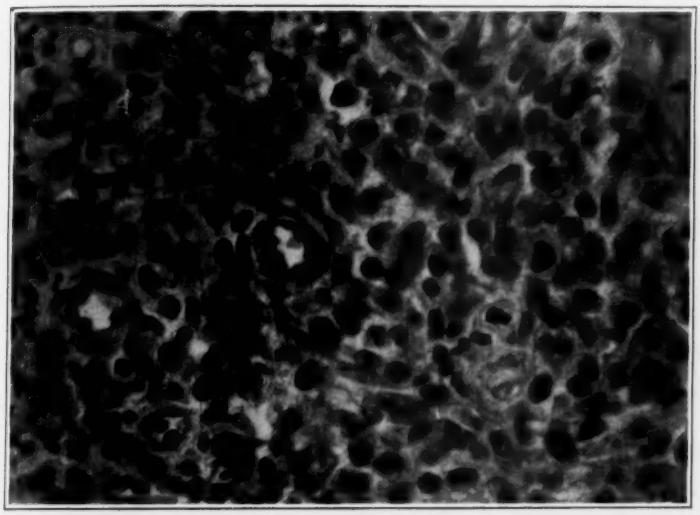

Fig. 9.—Reticulum cell hyperplasia, few mitotic figures, occasional eosinophils and plasma cells.

ment. These were most numerous at the borders of the scars. A few lymphocytes and plasma cells were scattered throughout, especially about the small blood vessels. In most instances the cutaneous vessels were moderately thick walled. The few subcutaneous arteries and arterioles presented marked thickening of the intima with narrowing of the lumen.

We submitted sections from the older lesions to several nationally known pathologists, and with their permission we quote their reports.

Dr. Paul Klemperer of the Mount Sinai Hospital in New York, who did the pathologic work on the case reported by Eller and Fox, stated:

"I have studied the sections you gave me, and in comparing them with those of Drs. Eller and Fox I noted a most remarkable resemblance. The extensive infiltration found within the derma consists of cells of a uniform type, resembling

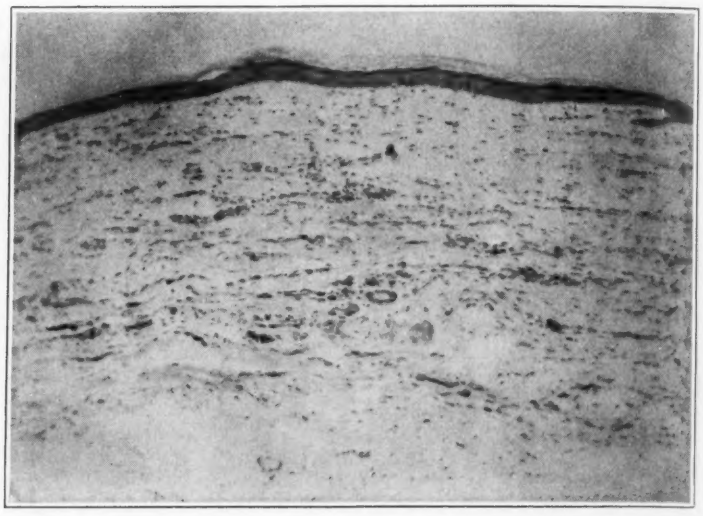

Fig. 10.—Low power photomicrograph, showing the trophic stage of the lesion in the skin, flattening of the rete and papillae, fibroblastic changes and occasional lymphocytes.

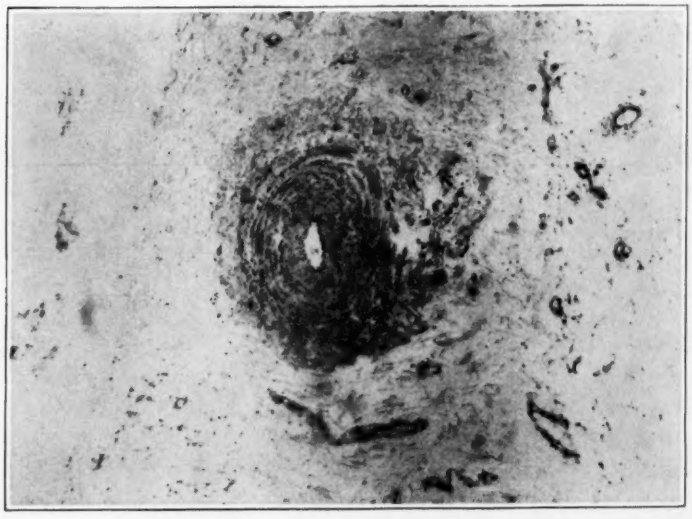

Fig. 11.—Low power magnification of blood vessel, showing hypertrophy throughout the layer, narrowing of the lumen and slight perivascular lymphocytic infiltration.

histiocytes. The many mitoses present indicate an unlimited proliferation of cells of histiocytic type. As to the origin of these cells, the process is too far advanced to warrant a definite statement.

"However, the picture resembles very much that in the case of Eller and Fox, in which I have observed the constituent cells to originate definitely from the perivascular mesenchymal cells around the small vessels. For this reason I assume a similar origin in your case, and I believe that we are dealing with a progressive proliferation of the perivascular mesenchymal cells with differentiation along histiocytic lines.

"I have shown the sections to Dr. S. Pollitzer, who is very much interested in the question. In fact, I studied with him the case of Eller and Fox. He seemed to be not as definite as I in accepting the identity of the condition in your case and that in the case of Fox and Eller."

Dr. N. Chandler Foot, of the New York Hospital, stated:

"The lesions are most astonishingly like the retothelial form of mycosis fungoides or multiple retothelial sarcoma of the skin. It seems almost inconceivable that these sections did not come from a tumor, but thanks to the history and to the healed lesions, I am ready to accept your diagnosis without question. The illustrations of Eller and Fox' paper might have been taken from the slides you sent me.

"Some of the lesions have a close resemblance to the amelanotic melanomas that one sometimes sees; others are more like granulomas; all of them show superficial inflammation. If it were not for the paper referred to (Eller and Fox [1]), the exactly similar history and the slides showing conclusively that the lesions underwent regression and healed, I should be sure that this was a retothelial sarcoma of the skin occurring multiply."

Dr. James Ewing, of the Memorial Hospital of New York, stated:

"The lesions belong in the group of granulomas; that is, they show chronic productive inflammation of focal distribution, with overgrowth of fixed tissue cells. There is a secondary pyogenic infection with ulceration. I do not think it is neoplastic, although there are numerous mitoses. The main type of proliferating cell appears to be a perivascular, adventitial cell, and in the fat tissues the fat cells are proliferating, making the lesion very cellular. There are secondary edema and inflammatory infiltration of the epidermis. Other prominent features are extensive edema and necrosis and a notable tendency to diffuse fibrosis. Both these processes seem to be out of proportion to the evidence of any primary toxic agent. The proliferating cells are peculiar. They are mononuclear and large, with vesicular nuclei and finely granular cytoplasm, with numerous fine particles. The lesion is very similar to those in a case submitted to us two years ago." (Drs. Eller and Fox)

Dr. Howard T. Karsner, of the Western Reserve University, Cleveland, stated:

"I have gone over the slides from your case of iododerma with great interest. I do not think that a diagnosis of tumor is tenable, because of distribution, course, pleomorphism of cells and lack of abnormalities in the mitotic figures. The lesion is not like that of Hodgkin's disease or the various leukoses. The lesion, in my opinion, is inflammatory, with exudation, hemorrhage, proliferation of reticulo-endothelial cells, destruction of tissue, granulation and cicatrization. I should be better satisfied with the identification of the reticulo-endothelial cells if slides showing staining of the reticulum were available, but they correspond in all other particulars.

"The lesions are like those in the case reported by Eller and Fox, except that vesiculation of the epidermis and the corium is not so prominent and that in your case there is well marked histo-eosinophilia. The eosinophilia is in line with some recent thought that drug idiosyncrasies may be of the same nature as other forms of hypersensitiveness."

Dr. K. Yardumian, of the Montefiore Hospital of Pittsburgh, stated:

"After careful study these slides show four definite stages of tissue reaction, with a gradual transition from one stage to another.

"The first stage shows an acute inflammatory process, with areas of necrosis involving both the epidermis and the corium. There is a definite interstitial exudate composed of polymorphonuclear cells, few eosinophils, and occasional monocytes. The blood vessels are engorged, and the lumens contain many polymorphonuclear cells. There are edema of the vessel walls and migration of inflammatory cells through the walls. There is considerable new capillary formation closely resembling that of nonspecific granulation tissue.

"The second stage of the process consists of a diminution of the number of polymorphonuclear cells, a slight increase in the number of eosinophils and plasma cells and the appearance of large wandering monocytes of the reticular type, with clear cytoplasm and large nuclei and nucleoli, situated mainly around the vessels. There is intracellular and intercellular edema.

"The third stage of the process shows hyperplasia of the so-called reticulum cells, with mitotic figures and hyperchromatic nuclei, mononucleated and multinucleated giant cells of the foreign body type infiltrating throughout the tissue down to the subcutaneous adipose tissue. This closely simulates a neoplasm. The eosinophils and plasma cells are still present. The blood vessels show thickening of the intima, with proliferation of the endothelial layer.

"The fourth stage shows atrophic changes. There are definite flattening of the rete Malpighii of the epidermis and complete disappearance of inflammatory cells and reticular cells. The fibroblasts are abundant in the stratum corium. Very occasional lymphocytes are present. The large blood vessels show thickening throughout the layers, with narrowing of the lumens.

"The diagnosis is: (1) acute necrotizing nonspecific inflammatory process invading all the layers of the skin; (2) nonspecific granuloma following an acute inflammatory process, and (3) sclerotic changes of the skin, the end-result of a healing process."

COMMENT

It seems evident that the condition described is a very definite entity and has characteristics which are sufficiently specific to merit a category of its own. Recently, D. E. H. Cleveland[11] described a case in which there were many features found in ours. His patient was a 64 year old man who had an extensive papulopustular eruption and tumor-like masses on the face, the scalp and the dorsa of the hands, with a septic temperature and a rapid pulse. Later these lesions became fungating masses over the malar eminence, supra-orbital regions, etc. His patient was taking a preparation called felsol, which contained iodine. Large quantities of iodine appeared in the patient's urine after

11. Cleveland, D. E. H.: Iododerma from Asthma Remedy, Canad. M. A. J. **30**:81, 1934.

he was given 100 cc. of a tenth-normal solution of sodium chloride intravenously. He recovered.

What precipitates this condition? Why does it occur relatively rarely?

The answer of the German writers seems to indicate that the patients who acquire these very serious or fatal forms of iododerma have a sensitivity to iodine. Joffe expressed the view that this idiosyncrasy to iodine manifests itself not only on the skin, but also in the kidneys and in the central nervous system. Wolfsohn [12] also expressed the opinion that certain persons are sensitive to iodine and that they show this sensitivity in two types of reaction: (1) inflammation of the skin and mucous membranes, with the resultant dermatitis, conjunctivitis, rhinitis, enteritis, pyelocystitis, etc., and (2) various forms of thyrotoxicosis.

Both Wolfsohn [13] and Hoke maintained that this idiosyncrasy to iodine is especially noted in patients suffering from exophthalmic goiter. Wolfsohn was able to prove this by the Prausnitz and Küstner method of transfer testing on normal persons.

The presence of eosinophils in the inflammatory exudate, especially noted in the remarks made by Dr. Howard T. Karsner of Cleveland, indicates that we may be dealing with a process of the same nature as other forms of hypersensitivity.

We believe that all the criteria have been fulfilled which are necessary to include our case in the group of those of fatal iododerma—(1) the peculiar cutaneous eruption, (2) the history of taking iodine, (3) the demonstration of iodine in the lesions, (4) the special histologic characteristics and (5) the similarity of the condition to those in the cases previously reported.

SUMMARY

A fatal case of iododerma (the eleventh in the literature) is reported.

The statements of Eller and Fox regarding the peculiar inflammatory process, which in some stages was suggestive of a neoplasm, are confirmed.

631 Jenkins Building.

12. Wolfsohn, Georg: Iodine Allergy in Surgery, Chirurg **4**:648, 1932.

13. Wolfsohn, Georg: Iodine Allergy in the Presence of Hyperthyroidism, Med. Klin. **27**:1788, 1931.

EXTENSIVE ULCERATION IN WHOLLY UNTREATED SYPHILIS

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AND
JUD R. SCHOLTZ, M.D.
LOS ANGELES

This case is reported not because we have anything new to contribute but merely because the case is so unusual that we feel it should be recorded in medical literature. Since the patient was under observation for only twelve days and since her condition was extremely critical, the opportunity for laboratory investigation and for therapy was limited.

REPORT OF A CASE

History.—H. H., a German woman aged 42, a housewife, entered the hospital on June 17, 1934, in the service for malignant diseases, because of extensive ulceration of the head and neck. The history was obtained from her husband because she was unable to talk coherently.

Four years previous to admission a small, painless "boil" appeared on the left cheek near the angle of the mouth. This lesion soon broke down and discharged a thick fluid which looked like pus, but instead of healing the lesion gradually grew larger and ulcerated (fig. 1).

Medical attention was not sought because the patient "did not believe in doctors." The ulceration continued to spread, slowly destroying the lips and nose. A membrane grew over the left eye, completely preventing vision. Then the process extended over the left ear and the left side of the head and finally covered the entire head. About nine months before she entered the hospital, the process began to extend rapidly and soon involved the neck and shoulders. During the last two years therapy consisted of prayer by a certain religious group and nursing by her children. During the early course of the disease there had been absence of pain and fever so far as the family could determine, but several weeks before we observed the patient pain due to the sticking of the bedclothes was so severe that she signified her desire to be brought to the hospital.

Examination and Course.—Examination revealed an atrocity rarely seen in modern times. The entire head, face, neck and shoulders and the upper part of the chest were involved in one continuous lesion. In the entire area there was no normal surface. The lesion consisted for the most part of a superficial ulcerative process, with large areas of involution which were covered by a thin, atrophic integument, in many places showing dilated capillaries. The active areas were covered with thick greenish crusts and pus.

The head showed complete loss of the scalp, including the subcutaneous tissue, and the outer table of bone was visible and eroded in several places. The left

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auricle was completely gone. The left eye was covered by a heavy granulating membrane. The right eye was encroached on by granulation tissue, and what remained of the cornea showed large areas of opacity. The bony and cartilaginous structure of the nose was entirely destroyed, except for the small cartilages and soft tissue at the external nares. Both lips were missing; the mandible, exposed and intact, was covered by thin scar tissue. The tongue appeared normal except for fissuring and dryness. The soft palate, uvula and pharyngeal pillars were replaced by firm, white scar tissue, which had contracted so that the pharyngeal opening was less than 3 cm. in diameter. The jaws were edentulous.

There was a remarkable dissection of the neck; on the right side the omohyoid and digastricus muscles were easily seen, also the carotid sheath. The dissection extended posteriorly to the spine of the scapula and anteriorly to the upper ribs. A more superficial ulceration, really the active margin of the lesion, extended almost to the breasts anteriorly and down to the second thoracic vertebra posteriorly. The active edge had a suggestion of polycyclic border, was raised only slightly and was dull red.

Fig. 1.—Enlargement of a picture taken by the patient's family from six to eight months after the onset. Clinical features of a granuloma are evident.

The remainder of the examination revealed nothing of significance except marked emaciation. There was no evidence of disease of the central nervous system, the heart and lungs were not unusual and there was good control of the extremities and the sphincters. The patient was fully conscious. She responded to questions and made attempts to speak, but it was difficult to understand her. She remained in the hospital for twelve days and died of bronchopneumonia. Treatment consisted of administration of a saturated solution of potassium iodide, 15 drops three times a day, and local applications of antiseptic compresses, which readily cleared up the purulent discharge.

Laboratory Data.—The Kolmer modification of the Wassermann test and the Kahn test of the blood repeatedly gave strongly positive (4 plus) reactions. Fluid from the ventricles taken immediately after death showed an anticomplementary reaction to the Kolmer modification of the Wassermann test and a 2 plus reaction to the Kahn test. Cultures on dextrose agar showed hemolytic streptococci and staphylococci. Smears and potassium hydroxide preparations showed no fungi.

Staining for acid-fast organisms revealed no tubercle bacilli. Several cultures by Sabouraud's method showed no growth. There was no growth on the Herrold medium. A guinea-pig inoculated with pus was normal two months later. A biopsy specimen stained for spirochetes by the Krajian method showed great numbers of spirochetal organisms of the type frequently seen in late ulcerative lesions of syphilis.

The husband of the patient had a strongly positive reaction to the Kolmer modification of the Wassermann and to the Kahn test of the blood. All four children gave negative reactions to the blood tests, and none showed any physical signs of congenital syphilis.

Fig. 2.—Photograph taken ten days before death. The arrow indicates spontaneous dissection of the muscles of the neck.

Postmortem Examination.—Autopsy was performed two hours after death. In addition to the lesion described, the following findings were significant:

The skull plate showed a normal inner table, except for one small area where the process had extended through the entire thickness of the bone, the bone having been replaced by granulation tissue. The dura was normal. The brain weighed 1,200 Gm.; the gyri over the dorsolateral surface appeared flattened, and the sulci were shallower than normal. The blood vessels were apparently normal. The lungs revealed bronchopneumonia. The cardiovascular system was normal except for old laminated clots in both common iliac veins which extended down into both femoral veins. This explains the moderate edema of both legs noted during life.

The liver weighed 800 Gm., the capsule being slightly wrinkled, and there was a slight general increase in periportal connective tissue.

Pathologic Report (Dr. Newton Evans, Pathologist, Los Angeles County Hospital): Microscopic study of sections of tissue made from biopsy material as well as of sections secured post mortem, all taken from lesions of the skin of the face, reveal the following changes: areas of ulceration; areas of subcutaneous necrosis with caseation, and much cellular exudate, principally polymorphonuclear cells and modified lymphocytes. There was marked proliferation of vascular endothelium and large cells having the appearance of fibroblasts. These sections were treated with special stains for spirochetes and acid-fast organisms and with the Gram-Weigert stain. The silver stain for spirochetes revealed great numbers of spirochetal organisms in the necrotic and inflammatory areas. While these

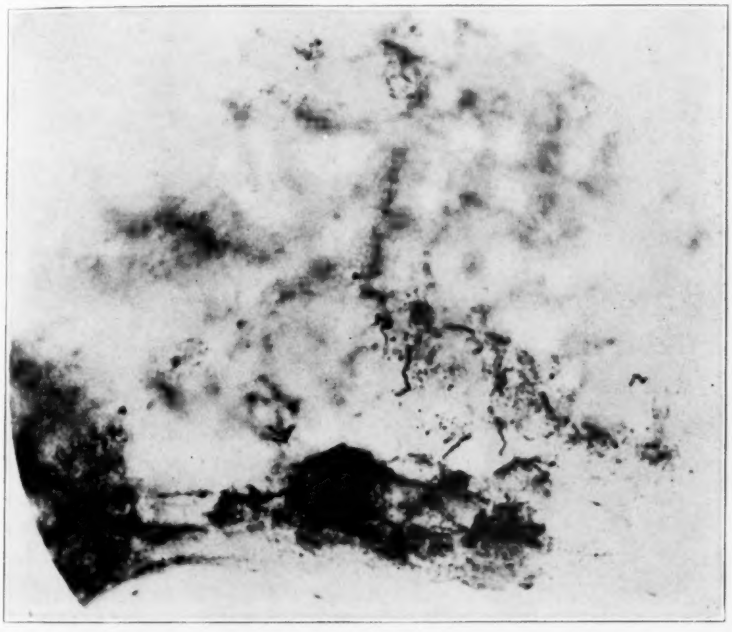

Fig. 3.—Photomicrograph of spirochetes, stained by the Krajian method. Organisms were observed both in biopsy and in necropsy material.

organisms did not have unequivocal characteristics of Spirochaeta pallida, they are, in my opinion, the modified forms of that organism, such as are found in tertiary ulcerative lesions. Many of these organisms were seen to have short sharp spirals for a portion of their length, and others of shorter length had the characteristic spirals throughout (three or four spirals).

The other special stains revealed nothing of significance. In my opinion these changes of the tissues and the spirochetes present were consistent with a tertiary syphilitic lesion of the skin.

COMMENT

We have the impression that this lesion was the result of a low grade pyogenic process in a syphilitic person. The pyogenic organisms

were hemolytic streptococci and staphylococci in symbiosis, as is frequently observed in extensive progressive ulcerations of the abdominal wall and elsewhere. The syphilitic element played a not unimportant rôle in the pathogenesis, as evidenced by the morphologic characteristics of the lesion, the tendency to spontaneous healing, the indolent nature, the pathologic picture and the spirochetal organisms noted in the microscopic sections.

The history of recurring, severe sore throat is of considerable significance and is typical of the recurrent pharyngeal lesions of untreated syphilis. The first attack of sore throat was self-limited and did not respond to local measures prescribed by the first physician, who obviously failed to make a correct diagnosis. One year later there was a second attack of sore throat, lasting longer and more destructive, as evidenced by the scarring and contracture observed in our examination. Thereafter followed a twelve year period of quiescence, until the appearance of the lesion which we have described.

In addition, the positive reactions to serologic tests, both of the patient and of her husband, together with the histopathologic observations should establish the diagnosis of syphilis on a definite basis.

Spirochetal organisms shown by silver stain, positive cultures of hemolytic streptococci and staphylococci and much negative evidence exclude the presence of any other etiologic agents.

We believe that the process could have been arrested had the patient sought medical attention at the inception of the disease, when there was a single nodule. Instead, she waited until she was beyond rehabilitation.

CONCLUSION

We report a case of unusually extensive ulceration of the head and neck. The patient had syphilis but had received no antisyphilitic treatment.

ERYTHROPLASIA OF QUEYRAT IN A NEGRO

REPORT OF A CASE

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Erythroplasia is a comparatively rare disease if the number of cases reported in this country is taken as a criterion. There are no reports in the literature relative to its occurrence in the Negro. Since it is recognized as a precancerous dermatitis, its presence in a Negro enhances interest in the case under consideration because, as is a matter of common knowledge, the incidence of malignant processes of the cutis in the Negro is extremely low.

REPORT OF CASE

W. M., married, a full-bloded Negro aged 77, was born in the state of Virginia but had resided in New York for the past sixty-eight years. He entered the clinic in September 1934, complaining of a genital lesion that had had its inception four years before and had resisted all types of local therapy. The subjective symptoms were comparatively mild. The patient experienced an occasional sharp twinge at irregular intervals; mild pruritus was present, and a scanty discharge from the lesion caused some annoyance.

The lesion was limited to and involved almost the entire glans penis. It was sharply defined, of polycyclic outline, slightly scaly and mainly dull pink. Over some areas it was pinkish white and resembled leukoplakia. It was not infiltrated. Scattered over the area of dermatitis were three small well defined, irregularly shaped superficial ulcers discharging a slight serous substance. Their borders were neither undermined nor indurated; their bases were clean and covered by irregular, pinkish-yellow granulation tissue. Small superficial yellowish crusts were seen about the open lesions. According to the patient's history, the ulcers had appeared three years previously; they bled readily on slight trauma and had a tendency to heal after an indefinite period, only to reappear later in other locations. The inguinal glands were not palpable. There were no lesions of the mouth. The patient never before had a genital eruption. There was no history of syphilis. The Wassermann test of the blood was negative. A biopsy was performed on October 10 and another on February 8. From the latter Dr. T. J. Riordan reported the following principal histologic observations:

1. A moderate amount of parakeratotic scale was present throughout the section.

2. There was marked proliferation of the epidermis, with an increase in the breadth and the length of the rete pegs.

3. The granular layer was absent.

From the Department of Dermatology and Syphilology of the Harlem Hospital.

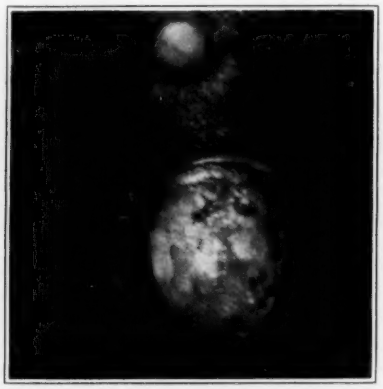

Fig. 1.—Erythroplasia of Queyrat of four years' duration in a Negro. (Photographed on Feb. 6, 1935; courtesy of Dr. Howard Fox.)

Fig. 2.—Low power photomicrograph showing marked proliferation of the epidermis, especially on the right side, where the rete pegs have increased considerably in length and breadth. On the extreme left the acanthosis is not nearly as marked, but there the epidermal cells are noticeably edematous. In that area a single large keratin ball may be seen in the parakeratotic layer.

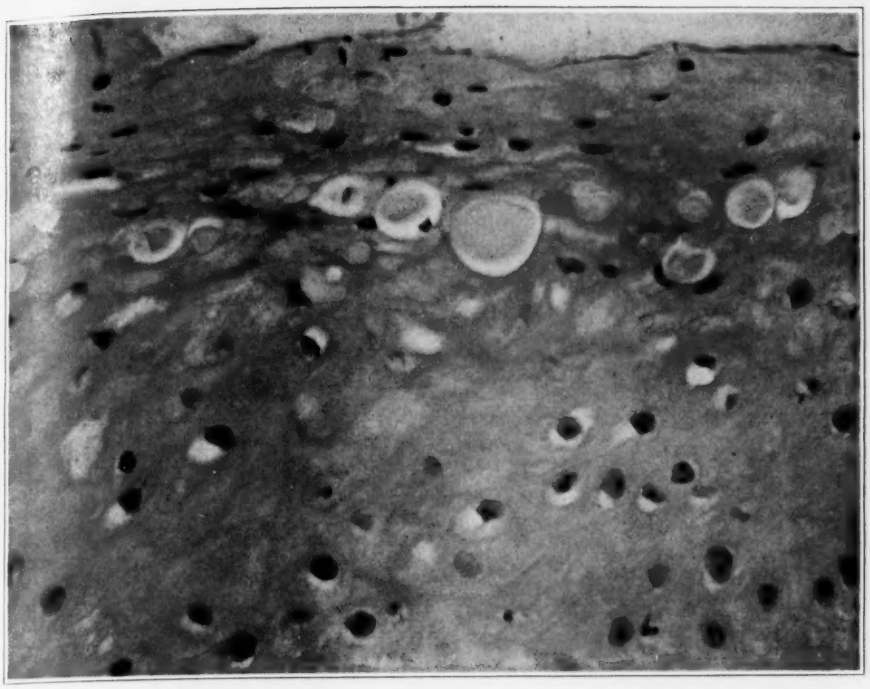

Fig. 3.—High power photomicrograph showing the marked edema of the rete cells and those comprising the parakeratotic layer. A number of keratin balls that closely simulate dyskeratotic cells are also shown. The absence of the granular layer may be noted.

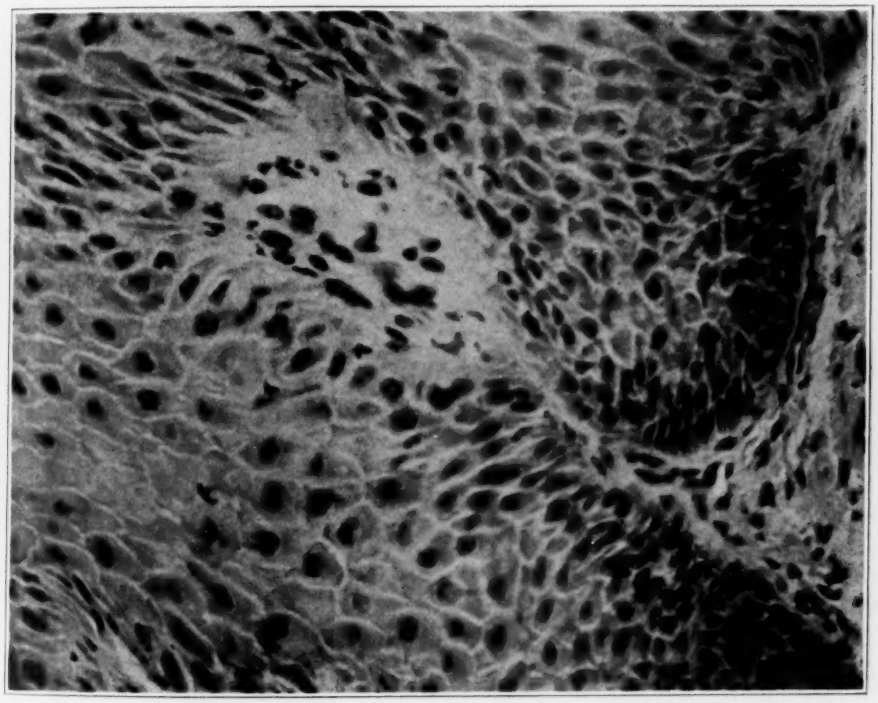

Fig. 4.—High power photomicrograph of a portion of the rete pegs in the markedly acanthotic zone, showing the interstitial edema. Very few mitotic figures may be seen. This lack of cellular activity might have resulted from the roentgen ray therapy previously applied and might also indicate the benign character of the lesion.

4. There was marked edema of the rete cells and of the cells comprising the parakeratotic corneous layer. In the latter area numerous keratin balls were found which might have been mistaken for dyskeratotic cells.

5. General and focal infiltration of the edematous corium with dilatation of capillary blood vessels had occurred. The infiltrate, limited to the upper third of the corium, consisted chiefly of round cells and, where focal, was perivascular. In the perivascular infiltration a number of plasma cells were seen.

6. No evidence of a malignant process could be detected.

Before the lesion was destroyed with a high frequency current, it was decided to observe the effects of roentgen ray therapy. Unfiltered radiation was applied in the following dosage: on November 26 and December 17, respectively, three fourths of a Holzknecht unit, and on January 7, a whole unit. No improvement was observed after this therapy; in fact, new ulcers continued to appear.

On February 8, with local anesthesia, the lesion was entirely destroyed by a single strong application of electrodesiccation. The resultant necrotic area was not removed by curettage. Other than a moderate edema of the prepuce, which gradually subsided, no complication developed. Healing was complete in two and one-half months. When the patient was seen fourteen months later there was no evidence of a relapse. The result was perfect not only from a therapeutic but also from a cosmetic standpoint.

COMMENT

The prevailing opinion is that erythroplasia, while benign in appearance, should be treated as a cancer at the outset because it is prone to early malignant change with metastasis. A case is reported in a Negro who had the disease for four years without the supervention of a malignant process. It is possible that the disease is of a more benign character in the Negro.

If there is no histologic evidence of malignant degeneration, it is doubtful if anything is to be gained by too great a destruction of tissue when the lesion is removed. Likewise, irradiation of the destroyed area and the adjacent lymph glands appears unnecessary. In the case reported a single heavy application of a unipolar high frequency current was sufficient to effect an apparent cure.

DERMATITIS DUE TO TRYPARSAMIDE

REPORT OF A CASE

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Dermatitis due to tryparsamide is rare. Ebaugh and Dickson,[1] Skoog,[2] O'Leary and Becker,[3] Phelps [4] and Bragman [5] recorded a total of 6 cases of dermatitis caused by the drug, during thirteen years of its use. Robinson [6] mentioned 3 instances of mild dermatitis occurring from 50,000 injections of tryparsamide. Phelps [4] observed 1 mild cutaneous reaction from 4,488 injections. Two cases of fixed eruption due to tryparsamide have been reported.[6,7] The infrequent occurrence of dermatitis resulting from treatment with tryparsamide warrants a report of the following case.

REPORT OF CASE

Mrs. A. T., aged 34, a waitress, was first seen by me in May 1934, with a diagnosis of cerebrospinal syphilis. The reactions of the blood and spinal fluid to the Wassermann test were positive. The patient had received 12 injections of neoarsphenamine in 1931; after each there were nausea, vomiting, chills and fever of from twenty-four to forty-eight hours' duration. No pruritus or cutaneous lesions resulted from the neoarsphenamine.

From May 31 until Dec. 12, 1935, the patient received 18 injections of tryparsamide. The first 5 doses were graduated from 0.5 to 1.5 Gm.; the dose for each of the succeeding 13 injections was 2 Gm.

On December 13, after receiving her treatment, the patient complained of a "red, itching eruption," appearing about eight hours after each of the 3 previous

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From the Good Hope Clinic, Department of Dermatology.

1. Ebaugh, F. G., and Dickson, Roger W.: The Use of Tryparsamide in the Treatment of General Paralysis, J. A. M. A. **83**:803 (Sept. 13) 1924.

2. Skoog, A. L.: Tryparsamide Therapy in Neurosyphilis, J. Missouri M. A. **22**:387, 1925.

3. O'Leary, P. A., and Becker, S. W.: Further Observations in the Treatment of Neurosyphilis with Tryparsamide, M. J. & Rec. **123**:305, 1926.

4. Phelps, J. R.: Reactions Incidental to Administration of 191,778 Doses of Neoarsphenamine and Other Arsenical Compounds in the United States Navy, U. S. Nav. M. Bull. **27**:205, 1929.

5. Bragman, L. J.: Tryparsamide Dermatitis, Am. J. Syph. & Neurol. **18**: 308, 1934.

6. Robinson, H. M.: Fixed Eruption Due to Tryparsamide, Am. J. Syph. & Neurol. **17**:507, 1933.

7. Kemp, J. E., and Menninger, W. C.: Case of Fixed Eruption Due to Tryparsamide, Am. J. Syph. & Neurol. **19**:195, 1935.

injections of tryparsamide. She stated that the itching eruption was localized on the upper part of the trunk and arms; it reached its greatest intensity in from twenty-four to forty-eight hours and then gradually subsided. She also said that the last cutaneous reaction was more severe than the two preceding ones had been. On examination a diffuse, ill defined, erythematous, scaling, maculopapular eruption was noted on the upper part of the thorax and was especially pronounced in the axillae. A similar, but intensified, eruption was observed three days after the eighteenth injection of tryparsamide. Patch tests with a concentrated solution of tryparsamide were positive on the involved skin but gave negative results on the uninvolved areas. Seven and one-half grains of calcium thiosulfate was given intravenously. Most of the lesions disappeared in one week.

COMMENT

Although dermatitis due to tryparsamide is considered mild, exfoliative dermatitis resulting from its use was described by Bragman [5] and Skoog.[2] Robinson [6] and Kemp and Menninger [7] stated the belief that the fixed eruption due to tryparsamide does not contraindicate the further use of the drug. Treatment was continued in their cases without further complications. The increased intensity of the dermatitis in my patient after each administration of tryparsamide necessitated the cessation of the drug in order to prevent a possible generalized exfoliative dermatitis.

It is interesting that because of the mild character of the eruption due to tryparsamide in the cases that have been described usually the patient was not impressed sufficiently to inform the physician of the reaction. My patient volunteered the information only after the third recurrence of the dermatitis. The amblyopia produced by tryparsamide has been stressed as the essential complication to avoid. As extensive exfoliative dermatitis has occasionally resulted from treatment with tryparsamide, it would be wise as a routine to examine all patients under therapy with tryparsamide and to question them regarding cutaneous lesions.

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VITAMIN C CONTENT OF SWEAT

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AND

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Recently one of us [1] studied and reported on the content of reducing substances in sweat. One of these, which has been much studied recently, is vitamin C (cevitamic acid). We are reporting on its quantitative presence in sweat.

Its physiologic action is not yet definitely established, although by virtue of its enol group it is supposed to play a rôle as a redox system and catalytic agent. Vitamin C has been found in the urine as a constant constituent, the amount excreted being dependent among other factors on the amount available in the body at the time. So far as we have been able to learn from a fairly thorough study of the literature, no one has yet reported on the presence of vitamin C in sweat. Since the composition of sweat approximates in many respects that of urine, one would expect vitamin C to occur in sweat also. This study was made and completed during August 1935.

METHOD

The sweat was collected, as previously described,[1] by having the patient sit in a heat chamber encased up to the shoulders in a rubber sack. For the estimation of the cevitamic acid the sweat was taken immediately after collection; 1 cc. of glacial acetic acid was added to 9 cc. of sweat, and the mixture was filtered. The filtrate was immediately titrated against the dye (2, 6-di-chlorophenolindophenol) by the method of Harris and Ray.[2] In several instances, when the sweat could not be immediately titrated, it was placed in the icebox and the determination was made within four hours. This delay did not seem to affect the results. The precaution was taken to titrate a sample of urine from each subject, to make sure that none of the members of the group had vitamin C deficiency.

RESULTS

Young adult white and Negro subjects were used for the most part, although three persons were over 50 years of age. All persons were given a bath before the sweating. Eighteen were sweated according

1. Cornbleet, Theodore: Sweat Reducing Substances in Yeast Dermatoses, J. A. M. A. **104**:1976 (June 1) 1935.

2. Harris, L. J., and Ray, S. N.: Lancet **1**:70, 1935.

to the method previously described by one of us. The values for cevitamic acid ranged from 0.55 to 0.64 mg. per hundred cubic centimeters of sweat.

COMMENT

The question arises as to whether our titration figures represent vitamin C alone or other reducing substances, such as cysteine and glutathione, which also occur in sweat. Harris and Ray, who have studied the question thoroughly, stated that when the material is titrated with acetic acid according to their method cysteine and glutathione are not reduced within the period of time that the titration is made.

Single specimens of urine vary greatly in vitamin C content, the amount being largely proportionate to the specific gravity. Samples of sweat, however, appear to have a rather uniform concentration of cevitamic acid, irrespective of the amount of sweat secreted during a given period. This value ranged in our series from 0.55 to 0.64 mg. per hundred cubic centimeters. The concentration of cevitamic acid in sweat approximated the lower levels normally found in urine when based on examination of twenty-four hour specimens. The amount was almost the same as that reported for blood serum, in which Eekelen and his associates [3] found about 0.5 mg. per hundred cubic centimeters.

CONCLUSION

Human sweat contains from 0.55 to 0.64 mg. of vitamin C (cevitamic acid) per hundred cubic centimeters. The values are almost constant in normal persons and seem to be independent of the amount of sweat secreted in a given period. There is no difference between the content of cevitamic acid in the sweat of a white person and that in the sweat of a Negro. The amount is about the same for the two sexes and is constant from adolescence through middle age.

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3. Eekelen, M.; van Emmerie, A.; Josephy, B., and Wolff, L. K.: Klin. Wchnschr. **13**:564, 1934.

PARATHERAPEUTIC ARTICULAR DISTURBANCES

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The term paratherapeutic articular disturbances is used to designate morbid articular conditions which develop in connection with antisyphilitic treatment either during or subsequent to a series of injections.

Up to the present little attention has been paid in the international literature to this complication, and the few cases which have been reported have not furnished a sufficient basis for any decision as to which antisyphilitic preparation is concerned. Presumably the uncertainty is due partly to the fact that the therapy employed in most cases has been a combined treatment (as a rule arsphenamine and bismuth) involving two toxic factors.

So far as I have been able to determine, Max Wolf [1] has given an analysis of the largest number of cases. In these six cases the condition appeared in connection with treatment with arsphenamine and bismuth. Wolf took no stand as to whether arsphenamine or bismuth was the causal factor, but he advanced the suggestion that the condition may be not a matter of direct medicamental toxic effect but rather an indirect effect through impairment of the hepatic function so that noxious autolytic products enter the blood stream and, for one thing, result in articular pain in patients who have a disposition thereto. He based this view on the fact that three of his patients had jaundice and two others presented signs of latent disturbances in the function of the liver. There was slight swelling of the joints of two of his patients, while the remainder showed no objective symptoms—only pain.

Aside from Wolf's paper, the literature has contained reports of only single cases or reviews of general considerations concerning this question, without a thorough analysis of any clinical material. In these reviews the articular disturbances have sometimes been attributed to arsphenamine and sometimes to bismuth.

Read before the Congress of Scandinavian Dermatologists, at the Ninth Session, Copenhagen, Denmark, 1935.

From the Dermatovenereologic Clinic of the Rigshospital, the University of Copenhagen. Prof. H. Haxthausen, M.D., chief physician.

1. Wolf, Max: Ueber seltenere Nebenerscheinungen bei kombinierter Bismut-Salvarsanbehandlung der Lues, Dermat. Ztschr. **45**:307, 1925.

Some of these reports have been cited by Juliusberg.[2] In a statistical study of the by-effects of arsphenamine, Burckhardt and Diem[3] found that articular disturbances occurred much more frequently in women (4.5 per cent) than in men (0.6 per cent). The total number of patients observed was twenty-nine; in twenty-one the symptoms appeared during the first or second series of treatments and in the remaining eight during the third series or later. Objective changes were not found in any of these patients, and the pain in the joints subsided in most cases when a change was made in the antisyphilitic preparation used (by this, presumably, the author meant that a different brand of arsphenamine was used). In most cases the patients were given combined arsphenamine-bismuth therapy. The authors thus apparently regarded arsphenamine as the etiologic factor.

Because of the divergence of views with regard to the etiologic factor in these cases and because of the large number of patients with articular disorders observed in recent years in the outpatient department of the dermatovenereologic polyclinic of the Rigshospital, the present study was undertaken.

A glance at table 1 gives some suggestion as to the source of the noxious therapeutic by-effects. It will be noticed that no complaints of articular disorders were recorded prior to 1924.[4] They began to appear in 1924, after mercury had been replaced by bismuth, and their frequency increased considerably in the following years. In the last five or six years, in which there has been no particular change in the routine treatment as far as the use of bismuth is concerned, the percental frequency of articular disorders has been fairly constant.

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2. Juliusberg, F.: Nebenwirkungen der Bismutbehandlung, in Jadassohn, J.: Handbuch der Haut- und Geschlechtskrankheiten, Berlin, Julius Springer, 1928, vol. 18, p. 468.

3. Burckhardt, W., and Diem, E.: Arch. f. Dermat. u. Syph. **170**:435, 1934.

4. Prior to 1922 the antisyphilitic treatment in this clinic was as a rule introduced with a series of treatments with arsphenamine and mercury, the mercury being given in the form of an inunction or as mild mercurous chloride. Until 1918 the number of injections of arsphenamine in a series was as a rule only three or four; later it was increased to five or six and, from 1926 to 1927, often seven; after that year several patients were given more than one series of injections. In 1923 bismuth was gradually replaced by mercury, and during the next year the use of mercury was almost abandoned.

In later years the general therapeutic schema has been to give one or several combined series of injections of neoarsphenamine and bismuth with six or seven injections of neoarsphenamine and ten of bismuth hydroxide at intervals of one week (i. e., the whole series requiring two and one-half months). Arsphenamine is given alone only exceptionally, but bismuth is often given alone, especially as a preventive in later series, as mercury has been given previously. Single doses of neoarsphenamine have consisted of from 0.6 to 0.75 Gm.; and single doses of bismuth hydroxide in oil, of from 0.2 to 0.3 Gm. The interval between the two series is about two and one-half months.

It must be stated also that the arsphenamine therapy has been intensified during the same period, but it had already been intensified to some extent in 1921 without giving rise to any by-effects in the form of articular disorders. On the other hand, there was a distinct increase in the number of cases of erythema from that time on (table 1). The number of cases recorded in table 1 suggest that the causal factor in cases of paratherapeutic articular disturbances is—at any rate chiefly—to be looked for in the bismuth therapy.

In the period from 1924 to 1932 seventy-nine of two thousand, two hundred and thirty-five patients (3.5 per cent) had articular distur-

TABLE 1.—*Data on the By-Effects Noted in Patients Receiving Arsphenamine and Nonarsphenamine Treatment for Syphilis at the Dermatovenereologic Polyclinic of the Rigshospital from 1913 to 1932* *

	Number of Cases						
Year	Arsphenamine	No Arsphenamine	Total	Albuminuria	Erythema†	Jaundice	Articular Disturbances
1913	33	163	196	13	0	1	0
1914	80	207	287	8	1	1	0
1915	133	217	350	12	1	0	0
1916	179	137	316	24	0	2	0
1917	200	138	338	19	2	0	0
1918	203	100	303	12	0	1	0
1919	267	60	327	11	3	0	0
1920	252	44	296	13	3	0	0
1921	269	62	331	17	10	5	0
1922	236	50	286	13	5	4	0
1923‡	204	57	261	7	9	4	0
1924	230	28	258	8	6	10	3
1925	226	42	268	4	18	8	5
1926	285	34	319	0	18	17	7
1927	260	31	291	4	10	15	11
1928	198	19	217	0	14	7	14
1929	231	24	255	5	13	14	7
1930	235	16	251	3	11	10	13
1931	183	6	189	2	15	16	11
1932	177	10	187	1	9	10	8
	4,081	1,445	5,526	176	148	125	79

* Thirty-three per cent of the patients were men, 58 per cent women and 9 per cent children.
† Erythema due to treatment with mercury is not included here.
‡ Arsphenamine-mercury treatment was replaced by arsphenamine-bismuth therapy.

bances. In the same period the numbers of cases of the complications albuminuria, erythema and jaundice were 27, 123 and 105, or 1.2, 5.5 and 4.7 per cent, respectively.

Of the seventy-nine patients with articular disturbances, there were twenty-nine men and fifty women. These figures show that this complication is about equally frequent in the two sexes, as the total number of patients included 33 per cent men, 58 per cent women and 9 per cent children.

The disorders were most often polyarticular. Only a few patients showed objective signs in the form of a slight degree of swelling and redness, which conforms with the reports from other clinics. Thus in nearly all the cases the disorder was only arthralgia, which was some-

times very annoying. Hospitalization was necessary in two cases, and in several cases the pain persisted for months after the antisyphilitic treatment had been discontinued.

Table 2 shows that in a great majority of cases (73 per cent) the symptoms were associated with the first two series of antisyphilitic treatments. Only the first occurrence of pain in the joints is recorded in this account, but relapses were noted in subsequent series of treatments in several cases. Moreover, the intratherapeutic onset of pain is much more frequent than the posttherapeutic, the onset being intratherapeutic in about 75 per cent of these cases. This probably means that when the first two or three series of injections have been completed without the appearance of this complication, the chance that paratherapeutic articular disturbances will occur subsequently is slight. Further-

TABLE 2.—*Data on Cases of Paratherapeutic Erythema, Jaundice and Articular Disturbances in Patients Under Antisyphilitic Treatment in the Dermatovenereologic Polyclinic of the Rigshospital from 1913 to 1932*

		Number of Cases				
		Series 1	Series 2	Series 3	Series 4 or Later	Total
Erythema	During treatment	93	13	6	7	119
	After treatment	18	6	0	5	29
	Total	111	19	6	12	148
Jaundice	During treatment	16	22	9	5	52
	After treatment	27	20	5	12	64
	Total	43	42	14	17	116
Articular Disturbances	During treatment	18	29	6	7	60
	After treatment	10	1	4	4	19
	Total	28	30	10	11	79

more, the predominance of the intratherapeutic onset suggests that there is a direct toxic-medicamental effect, which is in keeping with the clinical observation that the articular pain often occurs on the same day or a few days after an injection has been given, becoming accentuated after each subsequent injection.

A similar time relationship was noted in the cases of erythema. In nearly all these cases the erythema was due exclusively to arsphenamine, only a few (even doubtful) being attributable to bismuth. Jaundice was found chiefly in connection with the first two series of injections (73 per cent), but the posttherapeutic onset was somewhat more frequent than the intratherapeutic: the intoxication was more cumulative.

Thus, erythema was, as a rule, the earliest of the three complications; next was the articular disturbance, and finally jaundice developed. However, this sequence was not noted in every instance in which two or three of these by-effects appeared. In sixteen cases both articular pain and erythema were present, but in only two cases were they coin-

cidental. In one case the erythema appeared in a later series of treatments, and in the remaining cases it appeared prior to the articular pain, which then made its appearance most often during a subsequent series of treatments. In most cases the clinical findings as well as the history suggested that the erythema was ascribable to arsphenamine, and in some cases this origin was verified later by cutaneous tests.

The combination of pain in the joints and jaundice was noted in ten cases, the jaundice appearing before the pain in three and after the pain in seven cases. As in the preceding combination, the two complications usually did not occur during the same series of treatments. In addition to these ten cases, the presence of latent hepatitis was ascertained in two cases by means of functional tests; in two other cases the presence of this condition was suggested by various symptoms (nausea, tiredness and gastro-intestinal complaints). Yet in this material the combination of hepatic symptoms and articular disturbances was not so

TABLE 3.—*Data on Cases of Erythema, Jaundice and Articular Disturbances and on the Medication Used*

Medication	Number of Cases		
	Erythema	Jaundice	Articular Disturbances
Arsphenamine or neoarsphenamine	6	13	3
Arsphenamine or neoarsphenamine and mercury or bismuth hydroxide	133	69	43*
Bismuth hydroxide or mercury	9	34	33*
	148	116	79

* Only when bismuth, not mercury, had been administered.

frequent that it seems justifiable to explain the articular disturbances as a result of the injury to the parenchyma of the liver.

Albuminuria was noted in two cases, in one before the articular pain developed and in the other case simultaneously with the pain.

The question of the relation of the pain in the joints to the two preparations employed, arsphenamine and bismuth, is naturally of considerable interest, especially with regard to the continuance of antisyphilitic treatment. That mercury can be disregarded has been shown in table 1, as the data point directly toward bismuth as the source of trouble. This is further emphasized by the data recorded in table 2, where the cases of erythema, articular disturbances and jaundice are entered according to the series of antisyphilitic treatments during which the symptoms first appeared.

It is evident that erythema occurred predominantly in connection with a line of therapy that included the administration of arsphenamine and only exceptionally after bismuth alone was given. As for jaundice, in only about a third of the cases did the complication occur in connection with bismuth therapy. However, it must be mentioned that in a large

number of these cases the symptoms were posttherapeutic, indicating that there had been a cumulative effect; so that it is difficult from these data alone to decide whether a preceding series of injections of arsphenamine may not have played a rôle. In an even larger percentage of cases the articular disturbances developed after treatment with bismuth alone (42 per cent), which is the more convincing as this complication is predominantly intratherapeutic.

But even though these two statistical tables furnish essential evidence as to a causal relation between therapy with bismuth and articular disorders, it is only proper to caution against the assumption that the pain in the joints is dependent on this preparation exclusively. Just as arsphenamine and bismuth supplement each other therapeutically, there can hardly be any doubt that their combination in some cases has a toxic action; this seems indicated by the previously mentioned combination of several by-effects.

In only one case was the patient given bismuth alone (in two series). As the pain in the joints was noted during both series of injections, there can be no reasonable doubt about its relations to the bismuth preparation.

As shown in table 2, of the seventy-nine cases of articular disorders, in thirty-three the disturbance began during or after a series of treatments with bismuth alone, but in thirty-two of these cases arsphenamine had been given previously, most often in the preceding series. So one might think of the possibility of a cumulative effect of arsphenamine in these cases, analogous with what takes place undoubtedly often in the production of jaundice. This possibility is contradicted by the fact, however, that the bismuth therapy in a considerable percentage of these cases had to be discontinued on account of an increase in the severity of the articular pain and that this pain subsided when the treatment with bismuth was discontinued. In contrast, it may be mentioned that continuation of treatment with bismuth in cases of erythema or jaundice rarely caused any aggravation of these two complications.

When the articular pain appears during arsphenamine-bismuth therapy, it is naturally more difficult to differentiate the cause. Still, several of the cases give some fairly good information as to this particular point. In one case the pain began about two months after the first series of treatments (neoarsphenamine and bismuth); it did not reappear during the following series of treatments (neoarsphenamine alone), but the third series (bismuth alone) had to be discontinued on account of the recurrent pain.

In another case a somewhat similar condition was noted. The articular pain began after the fourth injection in the first series of treatments (neoarsphenamine and bismuth); treatment was then continued with neoarsphenamine alone, and there were no articular disturbances. Later, after four injections of bismuth hydroxide had been given, the pain reappeared.

In a third case the articular pain set in during the conclusion of the first series of treatments (neoarsphenamine and bismuth). There was no pain during the second series of treatments (neoarsphenamine), but it returned during the third series (bismuth). A causal connection between the pain and the administration of bismuth is suggested also in those cases in which the pain made its appearance during treatment with bismuth and such a long time after the administration of arsphenamine that any cumulative effect was out of the question. This applies in two cases in which no arsphenamine had been given for six months or more before the onset of articular pain. One of these cases illustrates this point well, as the patient had been treated through a period of five years with arsphenamine and mercurial inunction without any pain, but when bismuth treatment was instituted articular pain appeared.

In three other cases in which pain in the joints appeared during the third series of treatments (bismuth), being so intense in two cases that the series had to be discontinued, treatment with neoarsphenamine and bismuth had been given in the first series and bismuth alone in the second. In these cases, then, arsphenamine therapy antedated the articular pain by such a long period that a cumulative effect of arsphenamine as a cause of the pain may be considered rather improbable. Yet jaundice had appeared in two of these cases after the first and second series of treatments, respectively, while jaundice appeared in the third case shortly after the onset of the pain. The chronological relation between the articular pain and the bismuth therapy also is suggestive of a causal relation, but the complicating jaundice, which undoubtedly is largely ascribable to arsphenamine toxicosis, suggests the possibility that the latter poisoning forms a predisposing base for an articular toxic effect of bismuth.

In such cases, therefore, there is, no doubt, a complicated toxicosis, not only involving different organs but also dependent on a combined action of different preparations, the partial action of which may in some cases be difficult to establish. Some additional cases emphasize the causal significance of bismuth in this respect. In the case of a patient who had been given only one injection of arsphenamine and one injection of bismuth hydroxide and in whom the latter injection had brought about an intragluteal infiltration, articular pain appeared two or three weeks later. In three cases the pain was preceded by a marked degree of bismuth stomatitis.

Even though the findings that have been mentioned leave hardly any doubt that bismuth is in most cases the main cause of articular pain, three case records show that arsphenamine also sometimes plays the leading rôle in the production of this complication.

In one case the first two injections of arsphenamine and bismuth hydroxide were not followed by any by-effects, but the third injection (arsphenamine) gave

marked discomfort, including articular pain. Then the use of arsphenamine was discontinued, but the bismuth therapy was continued without the production of articular pain. In another case, in which albuminuria appeared during the second series of treatments (neoarsphenamine and bismuth), administration of bismuth was discontinued, while the neoarsphenamine therapy was continued. Articular pain appeared during the third series of treatments (neoarsphenamine). In a third case the pain began about three months after the third series of treatments (arsphenamine). The patient was confined to bed for two months because of this pain. Subsequently he was given four injections of bismuth hydroxide, without any subsequent articular disturbance. However, treatment had to be discontinued on account of dyspeptic symptoms (latent hepatitis?).

In these three cases, of course, the possibility that bismuth was the causal factor in the appearance of the articular pain cannot be ruled out absolutely, but it seems more natural to ascribe the pain to the arsphenamine preparation.

Finally, there was one case which must be mentioned, not because it contributes in any way to elucidate the etiologic differentiation between bismuth and arsphenamine but because it illustrates strikingly the general lack of knowledge concerning the causal relation of the articular pain in the course of antisyphilitic treatment. In the case of a young girl the second series of treatments with neoarsphenamine and bismuth had to be discontinued on account of annoying articular disturbances. The girl was admitted to a hospital, where the articular disorder was taken to be of rheumatic origin, although her past history did not show the occurrence of similar symptoms. On the advice of an otolaryngologist tonsillectomy was performed. As the antisyphilitic treatment was not continued, the apparent result of the tonsillectomy undoubtedly was not disappointing, for paratherapeutic articular pain usually subsides some time after the specific therapy is discontinued.

The predominant occurrence of the articular disturbances during the first two series of treatments might raise the question as to the influence of the syphilitic factor, just as has been the case—as a rule incorrectly—as far as so-called arsphenamine jaundice is concerned. In the case of articular pain the significance of the syphilitic factor would then have to be construed chiefly in this way: that the infection made the organism less resistant to other toxic action. This is hardly probable, however. Not only had the clinical symptoms of syphilis as a rule subsided long before the appearance of the articular disorders, but the serologic reactions were even negative in thirty-six cases, plus or minus in twenty-two, plus in six and 2 plus in thirteen. So any parallelism between the degree of the serologic reaction and the intensity of the articular pain is out of the question.

Yet, the question remains: Why does the articular pain appear particularly during the first series of treatments? As is evident from the data presented in table 2, this question applies not only to the onset

of articular pain but to the appearance of jaundice and erythema, with the aforementioned differences in time relation.

As already stated, the syphilitic factor can hardly be dominating in this respect, because then it would be reasonable to expect a certain proportionate connection between the syphilitic infection and the appearance of the by-effects, and no such connection was found.

The toxic effect of a drug is dependent chiefly on two factors: the drug itself (chemical composition, size of dose, etc.) and the tolerance of the patient. Variations in these two respects are probably enough to explain the early onset of the by-effects here mentioned, which were observed in only a small percentage of the total number of patients who received antisyphilitic treatment, for the employed doses are merely therapeutic and cannot be said to be toxic for "normal" patients.

The significance of the medicamental factor in the early appearance of these complications rests with the fact that the intensity of the treatment is generally greatest at that time.

The individual tolerance is dependent on the detoxicating power of the organism and on the functional capacity of the excretory organs. When these safety valves fail to work properly, the toxic by-effects appear. As the demands on the organism are heaviest at first (when the therapy is most intensive), it is only natural that the injury to the organism manifests itself at this time. In the greater majority of cases, however, these functions are satisfactory enough to counterbalance the toxicity of the given preparations, either by neutralizing processes or by increased excretion, that is, the treatment is tolerated. Among the factors which bring about a decrease in the tolerance, syphilis is naturally considered; but, for the reasons already mentioned, this factor is undoubtedly of minor significance. It is hardly conceivable that internal organs may be damaged considerably by syphilis when symptoms from the skin and mucous membranes have disappeared, together with the positive serum reactions. It seems more probable, therefore, that the intolerance may be dependent chiefly on certain nonsyphilitic factors, such as infection which has caused a decrease of organic functions, poor nutrition, alcoholism or other poisons with an affinity for the organs and congenital intolerance. The relation of these conditions to individual organic functions and the affinity of the chemical substance for certain cells or organs play a significant rôle in the nature of the resulting complication.

In the skin the complication is usually erythema after the administration of arsphenamine; in the liver it is jaundice (hepatitis), and in the joints it is arthralgia, which, according to the data just given, is as a rule undoubtedly ascribable to bismuth.

The appearance of several by-effects in one patient often signifies an impairment of several functions that is presumably in some cases to be

attributed to the concurrent employment of other preparations (combined therapy).

As far as the articular disturbances are concerned, it is still possible—even though bismuth is to be considered the noxious substance in most of the cases—that arsphenamine nevertheless plays a toxic rôle by overtaxing the detoxicating mechanism, which, as is well known, is largely dependent on the hepatic function. Some evidence in this direction is found in the fact that in several cases in which there were subjective by-effects, including articular disturbances, after combined arsphenamine bismuth therapy, all the symptoms, including the articular disorders, disappeared when arsphenamine was given in a concentrated solution of dextrose.

SUMMARY

Paratherapeutic articular disorders are in a great majority of cases due to the administration of bismuth and only in exceptional cases to the administration of arsphenamine. This conclusion is derived from the following findings and considerations based on an analysis of seventy-nine cases in a total of two thousand, two hundred and thirty-five cases in which antisyphilitic treatment was given:

Cases of arthralgia were not recorded until arsphenamine-mercury treatment was replaced by arsphenamine-bismuth treatment.

The articular pain was aggravated by continuation of the bismuth treatment, so that this form of therapy had to be discontinued in a fairly large number of cases. The pain subsided when the bismuth therapy was discontinued.

In only 4 per cent of the cases of articular disturbances did the symptoms begin to appear during or after a series of treatments with arsphenamine; in 54 per cent it appeared during or after a series of treatments with arsphenamine and bismuth, and in 42 per cent, during or after a series of treatments with bismuth alone.

The last-mentioned evidence concerning the connection between the articular pain and the bismuth intoxication is further emphasized by the fact that the onset of arthralgia is predominantly intratherapeutic (75 per cent), appearing often within a short time (from one to a few days) after an injection of bismuth, and is accentuated by each subsequent injection of this substance.

An analysis of the individual cases showed several instances in which articular pain first appeared during a course of combined treatment (arsphenamine and bismuth) and subsided when the treatment was continued with arsphenamine alone, while it recurred when bismuth was again given.

THE PIGMENTARY FORM OF VERRUCA PLANA

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Recent observation of three cases of hyperpigmentary lesions of verruca plana called attention to the differential diagnosis between lentigines, ephelides and these unusual pigmentary lesions of verruca plana. In one case there were none of the usual lesions of verruca plana, while in the other two, one or more typical lesions were seen in addition to the hyperpigmented lesions.

Hyperpigmentary lesions vary in size from those that are scarcely perceptible to those that are 1 cm. in diameter. They are yellowish brown, have a smooth, nonverrucous surface, are nonelevated or are almost imperceptibly elevated and, according to Freudenthal and Spitzer,[1] are differentiated from ephelides and lentigines by the fact that they can be curetted, while the latter two lesions cannot.

REPORT OF CASES

CASE 1.—A married woman aged 24 years had for several months noticed on the right side of the face brown spots which had been growing more numerous and larger (fig. 1). Various types of treatment had given no relief. Over the right side of the face and forehead were irregular, yellowish-brown, scarcely elevated lesions varying in diameter from less than 1 mm. to 1 cm. No linear arrangement was apparent, and no typical verrucae planae were seen. A specimen for biopsy was removed from a slightly elevated lesion on the forehead. A section stained with hemalum, erythrosin and saffron (fig. 2) showed that the stratum corneum was thickened and loose. No parakeratosis was present. The stratum granulosum was irregularly thickened. In the thickest portions the cells of the stratum granulosum and those immediately beneath showed marked vacuolation and contained less keratohyalin. The stratum mucosum was acanthotic, and the cells of the basal portion were fusiform in the regions of greatest change in the stratum granulosum. Papillae were infrequent, and a slight perivascular infiltrate was seen in the dermis beneath the regions of greatest change in the epidermis. Reaction to silver showed most of the pigment to be located in the basal portion of the epidermis, but it extended even into the stratum corneum. The granules were elongated and of normal size. Practically no dendritic cells were seen. Chromatophores containing melanin extended deeply into the dermis.

From the Section of Dermatology of the Department of Medicine of the University of Chicago.

1. Freudenthal, W., and Spitzer, R.: Warzen und Kondylome, in Jadassohn, J.: Handbuch der Haut- und Geschlechtskrankheiten, Berlin, Julius Springer, 1933, vol. 12, pt. 3.

Fig. 1.—Hyperpigmentary nonelevated verruca plana.

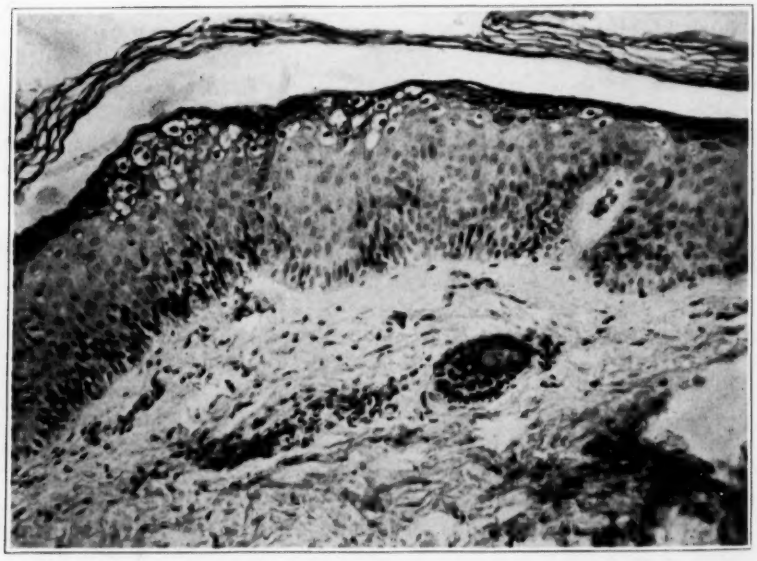

Fig. 2.—Section of a slightly elevated pigmentary lesion of verruca plana. The principal change is in the stratum granulosum. Low power; hemalum-erythrosin-saffron stain.

CASE 2.—A young woman presented above the left eyebrow a solitary irregular yellowish-brown plaque 1 cm. in diameter, which was the only lesion she had noticed. It was scarcely, if at all, elevated. On the same side of the forehead a single typical verruca plana was found.

CASE 3.—A young woman presented typical verruca plana on the hand and several pigmented lesions on the forearm, varying to 1 cm. in diameter. Histologic examination of the largest lesion showed the same changes as those seen in case 1 except that in silver preparations some of the granules in the basal layer were larger than normal and were globular rather than elongated.

SUMMARY

Three cases of hyperpigmentary verruca plana are reported. In two instances typical lesions of verruca plana were present, but in the other (case 1) the lesions were all pigmentary and practically nonelevated. The lesions might have been confused with lentigines or ephelides. Histologic examination verified the diagnosis in two cases. The pigment was melanin and was located chiefly in the basal portion of the epidermis. Absence of dendritic cells showed the process to be relatively inactive.

TRI-ETHANOLAMINE: AN ADJUNCT TO DERMATOLOGIC THERAPY

WITH SPECIAL REFERENCE TO RINGWORM OF THE SCALP

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In a previous report [1] I discussed some general considerations of the use of tri-ethanolamine. I have found this drug to be of sufficient value to warrant a second report. The tri-ethanolamine used was originally furnished to me by the Carbide and Carbon Chemical Corporation in response to my request for a chemical which would increase the penetration of drugs in their use on the skin. Because of the fact that tri-ethanolamine markedly lowers surface tension, it was at first used solely for this purpose. Combining it with chemicals in certain ointments, however, brought out reactions which have proved to be advantageous therapeutically. Some of these formulas were suggested in my original article and are reported again mainly to reiterate their value.

One of the useful properties of tri-ethanolamine has been to facilitate removal of ointments and oily preparations from the skin or hair. I have also found that its addition to tincture of green soap greatly increases the ability of the tincture to carry such oils as juniper tar. When such a combination is used without tri-ethanolamine, the hair remains sticky and oily; with the addition of tri-ethanolamine the hair washes clean, acquires gloss and gives the appearance of being brightened. The formula is as follows:

	Gm.
Juniper tar	12
Tri-ethanolamine	10
Tincture of green soap	120

M. Sig.: To be applied three hours before the hair is washed.
The proportion of juniper tar may be increased to 24 Gm. if desired.

In the case of Whitfield's ointment and other similar exfoliating ointments that are commonly used on the hands and feet, I have found that the addition of tri-ethanolamine increases the ability of the skin to tolerate the preparation. Particularly are the disagreeable dryness and cracking of the skin avoided. Tri-ethanolamine is an excellent solvent

1. Maynard, M. T.-R.: Triethanolamine: An Adjunct to Dermatologic Therapy, Arch. Dermat. & Syph. **25**:1041 (June) 1932.

for salicylic acid, rendering an ointment which is smooth and far less irritating than is usually the case. In treating dermatophytosis the following two formulas, used in the way prescribed, have been more uniformly successful than any other treatment I have employed.

	Gm.
Oxyquinoline sulfate	0.3
Tri-ethanolamine	4.0
Ointment of coal tar	30.0

	Gm.
Oxyquinoline sulfate	0.3
Tri-ethanolamine	4.0
Whitfield's ointment	30.0

M. Sig.: Alternate these ointments every three days.

TREATMENT OF RINGWORM OF THE SCALP

In the treatment of ringworm of the scalp my formula as originally published has continued to give uniformly successful results. This formula is as follows:

	Gm.
Iodine crystals	4
Tri-ethanolamine	4
Goose grease	30

When the pharmacist is mixing this prescription he must never add the tri-ethanolamine and the iodine at the same time but must mix the iodine into the goose grease and then add the tri-ethanolamine with as little friction as possible. The reaction between the tri-ethanolamine and the iodine is violent, but in the presence of goose grease a slow change takes place, during which the ointment is the most active. The preparation should be dark brown to be effective and should be kept as cold as possible when not in use. When it becomes the color of chicken fat, a phenomenon which ordinarily takes place in about ten days, the ointment is less effective. In a series of thirty-six patients with ringworm of the scalp treated with this preparation no untoward reactions have occurred, healing has been rapid and there have been no relapses. I have insisted on the roots of the hairs being spore-negative before considering the patient cured. However, after two weeks of treatment the disease commonly appears to be cured. The shortest duration of treatment of a patient in this study was sixteen days; the longest, sixty-two days. The average duration of treatment was thirty-four days.

Iodine reactions to this treatment are rare. It is probable, however, that a person frankly sensitive to iodine would have trouble after treatment with this formula. Iodism occurred in two patients in my series. Lacrimation and rhinorrhea occurred in them. In these patients the conditions noted cleared completely in a few days when the medication

was stopped, after which the preparation was applied more cautiously without further trouble. The preparation is readily washed from the scalp or the hair. There is little actual irritation, and the treatment is well borne by even the youngest patients.

I regret that this series comprises only thirty-six cases. Further statistical study will have to be made. The results have been uniformly good, however, and I believe them to be superior to those of any other form of treatment in use at present.

The incorporation of tri-ethanolamine in ointments containing sulfur and heavy metals is not desirable, owing to the fact that tri-ethanolamine dissolves a certain amount of sulphur, with which it reacts to form metallic sulfides, with a consequent staining of the skin. Aside from this objectionable feature, I have had little trouble.

The hygroscopic properties of the chemical make tri-ethanolamine suitable for use as a compress medium. In four years of its use no irritation has occurred, and the results have been uniformly gratifying.

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Minor Notes

COPPER AS A CAUSE OF PERFUME DERMATITIS AND AS A SUNTAN STIMULANT

HERMAN GOODMAN, M.D., NEW YORK

In the production of perfume dermatitis the following three factors are generally held to be essential: sensitivity of the person, some ingredient in the perfume and the effect of natural summer sunlight. The factor in the perfume of toilet water may be the oil of bergamot, the composition and characteristics of which are given in the following tabulation:

> Oil of bergamot (oleum bergamottæ, N. F. VI) is a volatile oil which is expressed from the rind of fresh fruit of Citrus aurantium Linné var. bergamia. The oil is green or greenish yellow with a specific gravity of from 0.875 to 0.880 at 25 C. The green color is said to be due to chlorophyll. This is important because of the claim that ill effects from the use of perfume are due to chlorophyll quotients. Others claim that copper causes the coloration in the oil. It has an agreeable odor and is soluble in 60 per cent alcohol (9 in 100) and in 70 per cent alcohol (50 in 100). Two parts of oil with one part of alcohol gives a clear solution, and there is no turbidity on further addition of alcohol. The ingredients consist of d-limonene, dipenten, l'linalool, bergapten and l'linalyl acetate (from 34 to 40 per cent). The oil is used in perfume, insecticides, creams, clays, brilliantines, mouth washes, foot powders, nail preparations and toilet waters. Chlorophyll and copper have been advanced as the cause of perfume dermatitis. A combination of bergapten and copper from the distilling apparatus is suggested as the cause of the ill effects. There is much sophistication in oil of bergamot. Oil of bergamot is often adulterated by the addition of foreign esters, turpentine, lemon or orange oils, distilled bergamot oils, fatty oils and cedarwood oil. The oil derived by distillation is worthless.

It is possible that copper is present in the oil of bergamot and that either alone or in combination it may be responsible for the ill effect on the skin from the application of perfume.

There recently appeared in *The Journal of the American Medical Association* (**106**:629 [Feb. 22] 1936) an editorial on an allied subject which I believe strongly suggests that copper may be related, perhaps as a catalyst, to the formation of pigment in the skin and hair of mammals. This editorial, which was freely quoted and commented on, acted as an impetus to further consideration of the possibility that copper is a cause of perfume dermatitis. A chance visit with Prof. Marston Bogert at his laboratory in Columbia University brought up this matter. Professor Bogert had a clue which I had previously lacked. He showed me (what I should have known perhaps) that the finest grades of oil of bergamot are packed and shipped in copper canisters.

This item seems to clarify the matter completely. On discovering a source of copper, I am satisfied that copper has a share in the production of pigmentation of the skin. Copper can perhaps be found in the highest-priced perfumes, which give rise to the greatest number of cases of perfume dermatitis.

The evidence seems complete, but further laboratory study is necessary. I plan to have tests made for the presence of copper in various samples of oil of bergamot in different perfumes known to have caused perfume dermatitis, in eau de cologne used in obtaining a suntan and in samples of olive oil which instead of protecting a person from the sun have stimulated the production of suntan. The results of these tests will be reported in due time.

NOTE (July 3, 1936).—Spectroscopic and chemical tests of at least one of the perfumes of high price known to cause perfume dermatitis have disclosed the presence of copper. Further tests will be reported on at a later date.

Clinical Notes

LXXVI.—THREE DEFINITE ATTACKS OF PITYRIASIS ROSEA IN THE SAME PERSON

M. F. Engman Jr., M.D., and Roy L. Kile, M.D., St. Louis

The occurrence of two attacks of pityriasis rosea in the same person has been reported by many authors. A few cases of three or more attacks have been reported. The following case, in which the patient had three attacks of pityriasis rosea during thirteen years, was considered worthy of reporting.

REPORT OF A CASE

Mrs. M. M., a white woman aged 36, was first observed by Dr. M. F. Engman Sr. in May 1923. She presented a typical eruption of pityriasis rosea, with the herald patch on the left side of the neck; there were considerable itching and burning. The disease followed the usual course, and she was free from evidences of the eruption within a few weeks.

She was again seen on Feb. 7, 1927, by Dr. W. H. Mook, who noted that she had typical pityriasis rosea, with the herald patch beneath the right breast. The eruption was rather profuse, with many lesions over the trunk and thighs.

During the entire year of 1928 she had attacks of severe urticaria, the cause of which was not discovered; there has been no recurrence.

On March 19, 1936, she was again seen, with symptoms of typical pityriasis rosea. The herald patch was on the left side of the neck. Lesions were distributed mainly over the chest, the upper part of the arms and the neck. There was some pruritus. This last attack was the mildest of the three.

Her other history was irrelevant, except for the removal of a tumor of the lung by Dr. Evarts Graham in October 1935; after the operation she made an uneventful recovery.

COMMENT

The patient had three typical attacks of pityriasis rosea, with a minimum period of four years between attacks. The possibility of relapse could therefore be definitely ruled out. Each attack was typical; so there was no doubt as to the diagnosis.

Studies, observations and reports from the Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, Department of Dermatology, service of Dr. M. F. Engman Sr.

CUMULATIVE EFFECT OF APPLICATIONS OF RADIUM

William J. Young, M.D., Louisville, Ky.

Formerly, it was extremely common among pioneer roentgenologists to find marked changes and even cancerous lesions of the skin following exposure to roentgen rays. This, of course, was due to lack of adequate protection. Even

today the physician, so often engaged in advising others, becomes thoughtless and careless about protecting himself. Continual exposure to small doses of radiation on the part of any one who applies radium can easily result, eventually, in changes in the skin of the fingers.

I offer a brief report of a case of such a condition which occurred recently, with the description of a simple method of removing the keratotic lesion that resulted. The changes and appearances of overexposure to radium are too well known to merit repetition, but I hope that the brief report of this typical case may serve as a reminder of the need to exercise care.

REPORT OF A CASE

W. J. Y., aged 54, had been actively engaged in the administration of radium treatment for seventeen years, plaques, needles and tubes being used. The patient noticed several years ago that the skin of the finger tips became thin and the nails brittle at the ends and grooved. One year prior to examination a small keratotic lesion, the size of a pinhead, was noticed, but it was allowed to pursue its course. This lesion became many times larger and more sensitive to the touch. A definitely thickened area, measuring 1.5 mm. in diameter, with the formation of a crust, was found at the time of the removal of the lesion. The area was removed with a skin punch, 3 mm. in diameter, which was deemed adequate to extend beyond the permeation of any active tissue from the indurated area.

Sections of the specimen of skin showed a central hyperkeratotic core in the epithelium, and parakeratosis of the granular stratum. The cells of the rete were elongated and atypical in shape.

There were moderate subpapular infiltration of lymphocytes, generalized sclerosis of the arterioles and scarring of the corium. The changes were compatible with those occurring in old radiodermatitis, with early epithelial changes.

My associate, Dr. Jesshill Love, took the specimen on the basis of which diagnosis was made and described the pathologic changes in the specimen.

Correspondence

DERMATITIS HERPETIFORMIS NOT CURED BY FEVER THERAPY

To the Editor:—In the September 1935 issue of the ARCHIVES (vol. 32, p. 468) I reported a case of dermatitis herpetiformis in a male student at Stanford University in which the lesions disappeared after an attack of German measles and again after fever therapy in the form of hot baths. At the time I was skeptical as to the effects of the fever therapy and suggested that the disappearance of the lesions possibly was influenced by rest from college work, change of environment and life in the open air at the seashore in Mexico. Then I did not know that the patient was taking a solution of potassium arsenite steadily and having his prescription refilled regularly. He had been told to take it no longer than a month.

He wrote me stating that all of his summer vacation he had remained well. When I saw him after his return to Stanford University he presented fresh groups of typical vesicles over the forehead, sternum, abdomen and flexures of the elbows. He attributed this outbreak to the fact that he had stopped taking the potassium arsenite. He said that while taking from 5 to 15 drops daily his skin remained free from lesions. At times puffiness of the lower eyelids and conjunctival irritation developed but there were no other effects from the arsenic except gradually developing uniform hyperkeratosis of the palms (without the usual small keratoses). As the patient was a decided blond, there was no pigmentation. His general condition was excellent, and he was able to do better than average work in college. He was warned about the dangers of taking arsenic continuously. He had experienced no difficulty in obtaining the potassium arsenite either here or in Mexico and might have continued taking it until serious complications developed had this not been discovered. In prescribing arsenic I always give a nonrefillable prescription, but it seems that that is not sufficient protection.

It is possible that change of environment may have removed some underlying irritating factors, and perhaps this combined with the arsenic is what caused the lesions to disappear. The patient's return to extra hard college work (trying for high grades) no doubt was responsible in a measure for his relapse.

HARRY E. ALDERSON, M.D., Stanford University Medical School, San Francisco.

Abstracts from Current Literature

EDITED BY DR. HERBERT RATTNER

SARCOMA OF THE SOFT PARTS OBSERVED AT THE COLLIS P. HUNTINGTON MEMORIAL HOSPITAL, 1924-1929. C. C. SIMMONS, Am. J. Cancer **25**:621 (Nov.) 1935.

This study included twenty-four cases of fibrosarcoma of the skin; the mortality in that group was 25 per cent. All the patients who were living at the time of the survey had been treated by surgical removal; most of the lesions were neurogenic in origin. Radiation is considered of palliative value for relief of pain and prolongation of life.

TUMORS OF THE CONNECTIVE TISSUE. F. GESCHICKTER and DEAN LEWIS, Am. J. Cancer **25**:630 (Nov.) 1935.

This article includes a brief discussion of keloids and dermatofibromas and a comment on the development and etiology of tumors of connective tissue. There were 8 cases of dermatofibromas, all but 1 of which occurred in women, and the lesions were all on the upper portion of the arm or on the upper part of the body. In 5 cases tumors occurred in scar tissue, and in 2 others there was a history of trauma. Histologic examination showed the lesions to be circumscribed masses of acellular fibrous tissue containing normal elastic tissue. There were 125 cases of keloids, in 10 per cent of which multiple lesions were present. For treatment of keloids the authors advocate excision within the margin of the lesion, followed by radiotherapy.

A COMPARATIVE CYTOLOGICAL STUDY OF BENIGN AND MALIGNANT TISSUES. HERBERT K. FIDLER, Am. J. Cancer **25**:772 (Dec.) 1935.

An analysis by the wet film method, or smear from a freshly cut surface, of one hundred and fifty specimens resulted in only ten incorrect diagnoses, as shown by checking by conventional histologic studies. Fidler contends that the malignant cell is a morphologic entity recognizable by the smear method indicated. In fresh smears malignant cells, in contrast to benign cells, have no regular arrangement, no pavement structure and a lack of adherence to one another. The malignant cells are irregular in size and shape; their cellular outlines are often broken, and their cytoplasm stains more darkly than that of benign cells. In the malignant cell the nucleolus is always a prominent feature, being very large, frequently irregular in outline and single or multiple; the nucleus appears coarse and eccentric as compared to that of the benign cell.

FOERSTER, Milwaukee.

ERYTHEMA ANNULARE RHEUMATICUM. A. F. ABT, Am. J. M. Sc. **190**:824 (Dec.) 1935.

Abt calls attention to a specific erythematous annular eruption which, he believes, occurs only in connection with rheumatic endocarditis.

He describes the lesions as pale or bluish-red semicircles or rings which may be only from 2 to 4 mm. in diameter at the onset and may enlarge to from 1 to 3 cm. in diameter. They are always macular, never pruritic; they are never associated with edema or hemorrhage and disappear in a short time without scaling or pigmentation. The lesions are usually found on the chest, abdomen, thoracic walls and back.

The eruption never occurs early in an attack of acute rheumatic fever but appears only after endocardial involvement has developed. Its prognostic value is varied and questionable, and its exact nature is unknown at present.

Its occurrence may be considered as evidence either of the persistence of an active rheumatic endocarditis or as a sign of reactivation of the disease.

The case histories of six patients presenting these lesions are embodied in the article.

TULAREMIA: REPORT OF THREE FATAL CASES WITH AUTOPSIES. A. BERNSTEIN, Arch. Int. Med. **56**:1117 (Dec.) 1935.

Bernstein states that in the first of these three cases no clinical diagnosis of tularemia was made before the patient's death; a pathologic diagnosis was made at necropsy. In the other two cases the disease was diagnosed clinically ante mortem.

In addition to the usual symptoms the three patients showed clinical evidence of pulmonary involvement.

A detailed report of the autopsy is given. In each case caseous nodules were found in the lymph nodes, lungs, liver and spleen.

JAMIESON, Detroit.

THE RELATIVE IMPORTANCE OF SPECIFIC SKIN HYPERSENSITIVITY IN ADULT ATOPIC DERMATITIS. MARION B. SULZBERGER and JOSEPH GOODMAN, J. A. M. A. **106**:1000 (March 21) 1936.

Sulzberger and Goodman do not believe that the main cause of disseminated neurodermatitis is due to changes of the psyche as has been contended by a few authors. They state that there was a familial history of atopy in about 50 per cent of the fifty cases studied. Over half of the patients were subject to at least one other atopic disease such as asthma, hay fever, allergic vasomotor rhinitis or had previously had infantile eczema. The authors were impressed by the finding that the group showed fewer psychoneurotic tendencies than were found in patients with moderately severe acne vulgaris. In not more than 50 per cent of the patients did scratch tests give positive results for various foods and environmental allergens. Ragweed and silk were among the chief excitants. In patients giving positive reactions to scratch tests it was possible to demonstrate a high percentage of passive transfer reagins in the blood serum. Patch tests usually gave entirely negative results. A striking exception was the reaction noted to the application of certain salts of heavy metals and, in particular, to nickel sulfate. Although the improvement did not always, nor with any regularity, follow the removal of the allergen causing a cutaneous reaction, this was not proof against the atopic nature of the condition. In no case was it possible to reproduce the disease as such through either ingestion or application of agents to which the patient was sensitive. A change of environment and intercurrent infection, factors which are also well known to be beneficial to patients with asthma, hay fever and infantile eczema, frequently and strikingly benefited patients with neurodermatitis. There is evidence that other factors, as yet unknown, are important in the causation of the disease.

MISUSE OF TANNIC ACID. FREDERIC TAYLOR, J. A. M. A. **106**:1144 (April 4) 1936.

According to Taylor, tannic acid should not be used in superficial burns, as the coagulation affects the healthy epithelium as well as the burned tissue. It should be reserved for the severe types, and bland wet dressings and ointments should be applied to the great majority of second degree burns.

LEWIS, New York.

THE PATCH TEST FOR GOLD HYPERSENSITIVITY. M. R. LICHTENSTEIN, J. Allergy **6**:460 (July) 1935.

Patch tests with an ointment containing 33 per cent gold sodium thiosulfate in hydrous wool fat were made on 102 patients who were receiving treatment

with a compound of gold. Ninety-one patients were receiving injections of gold sodium thiosulfate, and 11 were being treated with gold succinimide. About one half of all patients tested had a positive reaction to the patch tests, and among these patients were included all those who exhibited the complications of dermatitis, neuritis or gastro-intestinal symptoms. According to Lichtenstein, these complications were due to the development of hypersensitivity to the drug rather than to its toxicity.

CARO, Chicago.

MACROLICHEN (DERMATOSIS PAPULOSA SOMALIENSIS). ALDO CASTELLANI, Brit. J. Dermat. **47**:395 (Oct.) 1935.

Castellani reports a case of chronic pruriginous papules and nodules occurring on the anterior aspects of the leg and not associated with hyperpigmentation. He suggests the name "macrolichen" because of the occurrence of large papules. The alternative term "dermatitis papulosa somaliensis" is suggested, because of the location of the disorder. The diagnosis is based on the presence of fairly large, pruriginous nodules on the anterior aspects of the legs. These lesions do not coalesce; they do not ulcerate; they are not hyperpigmented and are neither clinically or histologically like lesions of lichen planus. Two clinical photographs and eight photomicrographs are given.

ANGIOMA SERPIGINOSUM. HAMILTON MONTGOMERY and RICHARD J. BAILEY, Brit. J. Dermat. **47**:456 (Nov.) 1935.

The authors report a case of generalized angioma serpiginosum occurring in a woman aged 66. The symptoms were an extensive pink to reddish-brown mottling resulting from a macular and lichenoid papular eruption. Clearing occurred centrally both within groups and in the individual lesions, giving rise to round or serpiginous figures. A fine desquamation and wrinkling producing a condition resembling atrophy were noted. There was no unusual pigmentation. Infra-red photography showed that the varicosities of the legs were not related to the eruption. There was a gradual progressive fading of the eruption with almost complete involution.

Histologic examination showed parakeratosis and liquefaction necrosis of the basal layer. There was an endothelial proliferation in the papillary and subpapillary blood vessels, and many newly formed capillaries were observed. No blood pigment could be seen with stains for hemosiderin and hemofuscin. The collagen fibers were slightly degenerated.

On the basis of clinical and histologic studies the authors differentiate angioma serpiginosum from Schamberg's disease, purpura annularis telangiectodes, the lichenoid purpuric and pigmentary dermatitis of Gougerot and Blum and poikiloderma atrophicans vasculare of Jacobi. Three photographs and a photomicrograph are given.

ECZEMA: ITS DEFINITION AND ITS ETIOLOGY. H. G. ADAMSON, Brit. J. Dermat. **47**:497 (Dec.) 1935.

Adamson reserves the term "dermatitis" for eruptions which are due to local irritations of the skin and which are at first limited to the areas which are in contact with the irritant and later may, owing to hypersensitiveness of the patient, become generalized and take on the characteristics of eczema. Dermatitis is a "vasomotor reaction to external irritants," and eczema is a reaction on the part of the cellular elements of the epidermis itself. Adamson expresses the belief that the rôle of the internal factor in the etiology of eczema is still unsettled. He discusses the primary or essential lesion of eczema and the etiology.

WIEN, Chicago.

TUBERCULIN IN THE TREATMENT OF CUTANEOUS TUBERCULOSIS. H. S. BURNELL-JONES, Brit. M. J. **1**:1212 (June 15) 1935.

Burnell-Jones reports three cases of cutaneous tuberculosis. One patient had lupus vulgaris of the face; another, lupus verrucosus of one hand, and the third, lupus verrucosus of both hands; all three were treated with tuberculin. Three forms of tuberculin were used: albumose-free tuberculin, bacillen emulsion tuberculin and new tuberculin. There seems to be no special indication for choice nor for exact technic of administration. Although it is not stated directly, it may be inferred from the article that all the injections were given intradermally. The doses varied from 0.00001 to 0.525 cc., and the average interval between injections was about a week. A woman, aged 27, with lupus vulgaris of the face of fourteen years' duration showed extraordinary improvement after seven months of treatment with tuberculin, application of a solution of potassium phenolate and phenol and ultraviolet irradiation from the Finsen lamp. Photographs showing this patient's lesion before and after treatment are given. A man, aged 58, with lupus verrucosus of the left hand of twenty years' duration was treated for about one year. The treatment was interrupted by catarrhal attacks. In 1932 he spent fifteen weeks in a sanatorium, and examination of the sputum gave positive results. The patient also received ultraviolet irradiation from the Finsen lamp. The third patient was a man aged 57, an official killer of tuberculous cattle. His lesion had been present for about one and a half years before he received treatment. At the end of one year the lesion was almost completely healed. Photographs showing the changes in the lesion are given. The three patients had various degrees of general reaction; all gained weight; although Burnell-Jones calls attention to "the remarkable differences in the blood films" and suggests that "workers should do monthly differential blood counts" in each case, he does not give the results of any such observations in the cases reported.

APPEL, Boston.

IMPETIGO CONTAGIOSA: ITS EPIDEMIOLOGY AND CONTROL. J. L. NEWMAN, J. Hyg. **35**:150 (Feb.) 1935.

The epidemiologic aspect of the mild diseases of the skin, such as impetigo contagiosa, is poorly understood, because the cases are not reportable and often no physician is called. Formerly no distinction was made between the pyogenic condition impetigo and allergic conditions of the skin.

As is true of other streptococcic infections (scarlet fever and erysipelas) impetigo seems to be much milder at present than seventy years ago, when it was generally described as having definite constitutional symptoms, including fever. In a study of impetigo in over 319 families in a small city, in which a careful check could be made through the school, the department of health and the local physician, the following points were noted:

The primary lesion of impetigo is never single. In confusing traumatic conditions there is usually a definite history of injury, and the lesions are rarely found in hollow areas and less exposed situations.

Impetigo is not necessarily identical with "septic sores."

For over two years the incidence curve showed definite seasonal variations, being higher from the twenty-fifth to the thirty-first week, or at the midyear, uninfluenced by the beginning or end of school.

There is great general resemblance of the incidence curve for impetigo to similarly constructed curves for diseases of streptococcic origin.

It is believed that the uninjured skin is not penetrated by the organism but that abrasions, visible or not visible, are portals of entry.

The most definite source of contagion is another member of the family; in 14 per cent of the cases the infection was traced to this origin.

Since the close contact of children sleeping in the same bed caused fairly infrequent spread of impetigo, it is believed from both comparison of the data and observation in schools that schoolroom infection is not to be greatly feared.

Personal cleanliness is the greatest factor in the control of impetigo. Avoidance of the common use of drinking cups, towels and other objects and the prompt application of antiseptic and protective dressings to injuries of the skin are necessary. Exclusion of the infected child from school is of little practical value.

JANNEY, Wauwatosa, Wis. [AM. J. DIS. CHILD.]

TREATMENT OF STAPHYLOCOCCUS INFECTIONS WITH STAPHYLOCOCCUS TOXOID. M. A. GOHAR, J. Trop. Med. **38**:259 (Oct. 15) 1935.

Gohar gives in detail the method used in preparing the staphylococcus toxoid and also directions for its use by subcutaneous inoculation in cases of staphylococcic infections.

The results of its use in cases of acne with superimposed staphylococcic infection were satisfactory in most instances and so gratifying in some that the author was tempted to use only this toxoid in treating acne.

Similar results were obtained in other cases of staphylococcic infections. Reactions of varying severity followed the injection of the toxoid, but these became progressively less pronounced and were not sufficient to induce cessation of treatment.

JAMIESON, Detroit.

A COMPARATIVE STUDY OF THE RELATIVE EFFICACY OF ETHYL HYDNOCARPATE AND ETHYL MORRHUATE IN LEPROSY. G. R. RAO, Leprosy Rev. **6**:120 (July) 1935.

The author observed the effects of the simultaneous use of these two salts in the treatment of three patients with cutaneous and one with neural leprosy. A favorable report on the use of ethyl morrhuate by Rogers in 1924 and by Muir and others in 1924 suggested this undertaking. A 0.5 per cent solution of iodized ethyl hydnocarpate was injected intradermally into the lesions on one side of the body while diluted ethyl morrhuate was injected into those on the other side; injections were given once a week for a period of from one year and eight months to two years and four months.

The following observations were made: 1. On the hypopigmented, anesthetic and leprotic infiltrated areas as well as on the nodules, the clinical effect was more pronounced with the ethyl hydnocarpate. 2. The ethyl hydnocarpate was more efficacious in diminishing the total bacterial content of the lesions. 3. Ethyl morrhuate had a more marked irritating effect on the skin and was less efficacious than ethyl hydnocarpate.

The modus operandi of the hydnocarpus preparation is not known, and it cannot be deduced that the effect is due to the irritation on the skin, as the results of the experiment show that the morrhuate preparation is more irritating and less efficacious than the hydnocarpus preparation.

BAER, Pittsburgh, Pa.

EPIDEMIC PEMPHIGUS OR RITTER'S DISEASE OF THE NEW-BORN. DAVEO and BASSARGETTE, Bull. Soc. d'obst. et de gynéc. **24**:150 (Feb.) 1935.

The authors report the occurrence of an epidemic of bullous exfoliative dermatitis of the new-born. All degrees of the disease were observed, and in all cases the condition developed in a similar manner. Erythematous patches of more or less intense redness appeared, followed immediately by the development of bullae. The contents of the bullae were clear at first but became cloudy. Direct smears showed only pus cells. Staphylococci were recovered only by culture. The bullae then peeled, giving the appearance of second degree burns or, in extreme cases, causing the infant to resemble a macerated living fetus. Six cases are reported in detail. Two infants died one week after the onset of the disease, with hyperthermia and in collapse, their death apparently being due to an acute intoxication similar to that which occurs in burns. The authors state that they believe Ritter's disease to be only a peracute form of epidemic pemphigus of the new-born.

GLASER, Rochester, N. Y. [AM. J. DIS. CHILD.]

BLINDNESS FOLLOWING THE USE OF ACETYLARSAN. J. S. CHARAMIS, Bull. Soc. d'opht. de Paris, February 1935, p. 77.

Charamis reviews the history of the use of trivalent and pentavalent arsenicals in syphilis and their effects on the eye and its parts. He discusses the theories as to why pentavalent arsenicals may cause toxic effects in the optic nerves or release syphilitic toxins which in turn cause the damage.

The case reported is that of a patient aged 59 with syphilis of thirty years' standing. After the second injection of acetylarsan he became completely blind. In spite of extremely active treatment to prevent the continued toxic effects, the blindness remained permanent. A slight deafness which occurred with the blindness entirely disappeared. Charamis is inclined to believe that the dire effects of the drug are due to the many complications of syphilis, such as nephritis and cardiovascularitis, which this patient showed.

An interesting discussion of this and other papers on the same subject follows.

MAYER, Chicago. [ARCH. OPHTH.]

INFECTIOUS FEBRILE DERMATITIS. J. GATÉ, P. CUILLERET and A. FREIDEL, Nourrisson **23**:25 (Jan.) 1935.

A baby, aged 15 months, was acutely ill with stomatitis and dermatitis, which varied from erythema to eczema with pustular infections. Two cultures of the blood were positive for Staphylococcus. The same organism was recovered from the cutaneous pustules. Recovery followed treatment with a staphylococcus vaccine and maternohemotherapy.

EXFOLIATIVE DERMATITIS (RITTER'S DISEASE) AFTER BULLOUS IMPETIGO IN THE NEW-BORN. G. BOISSON, Nourrisson **23**:28 (Jan.) 1935.

In the case described the condition began as bullous impetigo when the baby was 8 days old. Two days later the skin exfoliated in large patches, and the baby died within a few hours. Both the father and mother had lesions of impetigo, which were held responsible for both the impetigo and the Ritter's disease in the infant.

ERYTHRODERMA DESQUAMATIVUM (LEINER-MOUSSONS' DISEASE). G. BLECHMANN and P. J. MÉNARD, Nourrisson **23**:89 (March) 1935.

In the case reported enterococci were recovered from the desquamating epidermis. On the supposition that these organisms might be the etiologic factor, an autovaccine was prepared and administered in small doses by mouth. Rapid recovery took place. The treatment merits further trial.

MCCLELLAND, Cleveland. [AM. J. DIS. CHILD.]

SPECIFIC SEROTHERAPY IN CASES OF CUTANEOUS CARBUNCLE. G. RIGGIO, Pediatria **43**:534 (May) 1935.

Riggio presents a critical review of the literature on the various methods of the treatment of carbuncle and reports six cases in children between 10 months and 10 years of age in which he utilized serotherapy. The serum was administered subcutaneously in doses varying from 10 to 50 cc., and the injections were repeated daily for from four to six days.

His results were remarkable not only because cure was obtained in 100 per cent of the cases but especially because of the immediate response of the condition from the standpoint of the local and the general disappearance of symptoms.

SIGNORELLI, New Orleans. [AM. J. DIS. CHILD.]

ACRODYNIA INFANTUM. V. PARDO-CASTELLÓ and RAMON IBARRA PÉREZ, Arch. de med. inf. **4**:1 (Jan.-March) 1935.

The child whose case is reported was a Negro, 4½ years of age. The onset was characterized by paralysis and convulsions. These symptoms disappeared and were followed by the symptoms typical of erythroderma. The authors believe that these manifestations confirm the view that erythroderma represents a disease of the nervous system, with secondary trophic and circulatory manifestations of the skin and peripheral polyneuritis.

TREATMENT OF SCROFULA WITH PONNDORF'S VACCINE. ADAUTO DE REZENDE, J. de pediat., Rio de Janeiro **2**:200 (May) 1935.

The author describes a case in which scrofula was treated for seven months by Ponndorf's vaccine (a vaccine prepared from human and bovine tubercle bacilli) with excellent results and disappearance of the tumor. He describes the method in detail, which consists of inoculation of the vaccine at intervals of three weeks, the dose beginning with 1 drop and increasing to 6. There was a general reaction of fever and malaise.

SANFORD, Chicago. [AM. J. DIS. CHILD.]

THE THERAPEUTIC USE OF EXTRACT OF SKIN IN DERMATOLOGY. WILHELM MILBRADT, Dermat. Wchnschr. **100**:622 (June 1) 1935.

Milbradt briefly reviews the previous attempts to use extracts of skin in dermatologic practice and discusses the rationale of this therapy. He considers this treatment as a true substitution therapy. An extract of the skin of an animal fetus was obtained by squeezing, and this was treated with gastric ferments. Electrodialysis completed the process. Tablets for oral administration and fluid for intravenous use were available. The treatment was useful in various pyogenic conditions and in the allergoses.

MILIARY LYMPHOCYTOMA OF THE SKIN. K. BERDE and M. LANG, Dermat. Wchnschr. **100**:641 (June 8) 1935.

In the past thirty-eight years only twenty-one cases of lymphocytoma miliare cutis have been described. In most instances the lesions occurred on the face. The authors observed a 29 year old man who had noticed an eruption on the extensor surfaces of the thighs ten or twelve years previously. When he was first seen there were palm-sized areas of atrophy on the thighs, consisting of small depressions in the skin. In addition there were groups of tiny nodules from the size of a pinhead to that of a lentil. Histologic examination showed a massive lymphocytic infiltrate on an endothelial network. The infiltrate extended beyond the nodules to a considerable distance. The authors state that local cutaneous amyloidosis, miliary sarcoid, miliary lupus, leiomyoma and lichenoid syphilid must be differentiated clinically.

THE DIETETIC TREATMENT OF ECZEMA WITH PARTICULAR REFERENCE TO THE INFLUENCE OF FOOD ON THE BLOOD PICTURE, ALKALI RESERVE AND POTASSIUM-CALCIUM QUOTIENT. ERNA ZITZKE and LENA PETERS, Dermat. Wchnschr. **100**:669 (June 15); 697 (June 22) 1935.

The literature regarding the use of diet in the treatment of cutaneous disorders is reviewed and discussed. The authors treated a series of patients with eczema and with psoriasis by means of a special diet which was meat-free, protein-poor, salt-poor and fat-rich. Blood cell counts and also extensive investigations of the chemical composition of the blood, especially in regard to the alkali reserve and the potassium-calcium quotient, were made. These were increased in most instances. Considerable clinical benefit was noted. The authors conclude that dietary methods of treatment should receive more attention than has been accorded them in the past.

THE LOCAL APPLICATION OF THALLIUM IN FUNGOUS INFECTIONS OF THE SCALP. S. LIEBERMANN, Dermat. Wchnschr. **100**:675 (June 15) 1935.

Liebermann reports successful results obtained by application of a solution of thallium to patches of tinea capitis to produce a temporary epilation. He encountered no unpleasant complications.

YEASTLIKE ORGANISMS OF THE DISEASED SKIN AND THEIR RÔLE IN THE DEVELOPMENT AND COURSE OF VARIOUS CUTANEOUS DISORDERS. DANIEL OLÁH, Dermat. Wchnschr. **100**:703 (June 22) 1935.

In the past three years Oláh has cultured scales from 1,379 patients with various cutaneous conditions. In a large number of instances various yeastlike organisms, usually considered nonpathogenic, were recovered. These were in addition to the ordinary pathogenic fungi recovered in cases of dermatophytosis, tinea capitis and like diseases. Every precaution was taken to avoid laboratory and surface contaminations. The author expresses the belief that these yeasts play some part in the course of the conditions in which they were found.

BLACK PIGMENTATION OF ANIMAL AND HUMAN HORNY SUBSTANCE BY MEANS OF MERCURY IMPREGNATION FOLLOWED BY EXPOSURE TO SUNLIGHT. F. JOHN, Dermat. Wchnschr. **100**:728 (June 29) 1935.

The finger-nails were rubbed with a 5 per cent solution of ammoniated mercury for five successive days. When they were exposed to sunlight a gray-black pigmentation developed. Ultraviolet radiation did not produce the same effect. A similar reaction could be produced by soaking particles of the horn of a cow in a solution of mercury bichloride and later exposing the particles to rays of the sun. Painting the nails with a weak alcoholic solution of iodine prevented the pigmentation from developing.

EXTENSIVE ULCUS GANGRAENOSUM OF THE GLANS PENIS IN WHICH DIPHTHERIA BACILLI WERE FOUND. JOHANNES WESSLING, Dermat. Wchnschr. **101**:862 (July 13) 1935.

In a 58 year old man a penile lesion developed two days after intercourse. The following week there was general malaise, and a deep necrotic ulcer developed. Dark-field examination failed to reveal spirochetes or fusiform bacilli. Bacteriologic examination showed diphtheria bacilli.

DEVELOPMENT OF CARCINOMA IN LESIONS OF CHRONIC DERMATOSES (PSORIASIS, ULCUS CRURIS AND LICHEN PLANUS VERRUCOSUS). K. HÖVELBORN, Dermat. Wchnschr. **101**:858 (July 13) 1935.

In a 61 year old patient who had psoriasis for many years a squamous cell epithelioma developed in one of the lesions on the hand. The patient had not taken excessive amounts of arsenic. In a 75 year old patient with a long standing lichen planus of the legs and forearms a chronic ulcer of the leg developed and after two and a half years became malignant. The histologic diagnosis was basospinocellular carcinoma.

In an asthmatic patient a squamous cell epithelioma developed on the back of the hand.

TAUSSIG, San Francisco.

HYPERSENSITIVITY OF THE SKIN TO BALSAM OF PERU. W. ENGELHARDT, München. med. Wchnschr. **82**:256 (Feb. 14) 1935.

Hypersensitivity of the skin to peruvian balsam is present in 2 per cent of persons who have had no cutaneous disease and have not used ointments, but in 10 per cent of patients with diseases of the skin who have used ointment. The hypersensitivity to this balsam is monovalent; other eczematogenous substances

do not produce a reaction in these patients. All the constituents of peruvian balsam are involved, each producing a reaction in the persons tested. Many ointments contain this balsam and therefore must be used with care. Whenever such a preparation is to be used extensively, a patch test should be made to determine the presence or absence of hypersensitivity.

TREATMENT OF CHRONIC APHTHOUS STOMATITIS. O. FRIED, München. med. Wchnschr. **82**:706 (May 2) 1935.

For the treatment of chronic aphthous stomatitis Fried advises brushing the teeth and rinsing the mouth with soap. The author states that he had the condition himself and that after trying all forms of therapy he found soap the only efficacious one. BRAHDY, Mount Vernon, N. Y. [AM. J. DIS. CHILD.]

EXPERIMENTAL STUDIES IN SOME OF THE TOXIC DERMATOSES. Y. TAKASUKI, Jap. J. Dermat. & Urol. **38**:440 (Sept.) 1935.

In 84 cases of various medicinal and occupational dermatoses the character of the tissue disposition was studied by means of a nonspecific (Witte's peptone) and a specific antigen (the drug producing the dermatitis).

The presence of the corresponding antibody was demonstrated by means of passive transference tests. The results were as follows: With Witte's peptone the Arthus reaction was positive in 55.9 per cent of 47 cases and with specific antigen it was positive in 77.5 per cent of 31 cases; with Witte's peptone the Prausnitz-Küstner reaction was positive in 50 per cent of 10 cases and with specific antigen it was positive in 66.6 per cent of 10 cases. Tests made with the complement-fixation reaction gave the following results: With Witte's peptone the reaction was positive in 57 per cent of 84 cases and with specific antigen it was positive in 42.8 per cent of 35 cases. The reaction to the percutaneous test was positive in only a few cases. Tests made according to a new method of the author, wherein the bit of skin is transferred, not to other areas of skin of the patient, but to the healthy skin of another person who is known to be nonallergic, gave a positive reaction in every person tested.

The author was also able to sensitize several guinea-pigs with injections of arsphenamine and with antipyrine. He expresses the belief that his studies have substantiated the allergic character of toxic eruptions.

THE VEGETATIVE NERVOUS SYSTEM IN LEPROSY. S. OHMORI, Jap. J. Dermat. & Urol. **38**:527 (Sept.) 1935.

The vegetative nervous system of nineteen patients with macular, seven patients with mixed, two patients with tubercular and two patients with neural leprosy was subjected to study by means of subcutaneous administration of epinephrine, atropine or pilocarpine and instillations of epinephrine into the conjunctival sac (Löwi reaction). In addition the Aschner and Czermak tests were made in each case, the criterion for positivity being a change of from 4 to 12 beats per minute in the pulse rate and that for extreme positivity, a change of 16 beats or over. Any dermographism was, of course, noted.

Vagotonia was present in sixteen patients (53.3 per cent). These included nine patients with macular, four with mixed, two with neural and one with tubercular leprosy. A diminished tonicity of the vegetative nervous system was found in three patients with mixed and in one patient with macular leprosy. Twenty-three patients were abnormally sensitive to pilocarpine, four showed abnormal sensitivity to epinephrine, and nine were abnormally sensitive to atropine.

Reactions to the Aschner and Czermak tests were positive in about one half of the patients; dermographism was present in one patient, and the Löwi reaction was not positive in any.

The author makes special mention of the presence of sympathicotonia in a patient with tubercular leprosy. J. W. BRENNAN, Chicago.

THE EFFECT OF INUNCTION WITH A COLLOIDAL PREPARATION OF MERCURY IN RABBITS INOCULATED INTRACUTANEOUSLY WITH SYPHILITIC MATERIAL: II. SECOND COMMUNICATION. HOGI KO, Lues: Bull. Soc. japon. de syph. **12**:30 (Feb.) 1935.

The effects of inunctions with an ointment containing 33 per cent mercury and a colloidal preparation of mercury in a concentration of 20 per cent on syphilitic rabbits were studied and compared. The inunctions were given in courses of six successive days with an interval of two days between. One complete course consists of six such courses.

The inunctions with mercury ointment, when started seven days before the animals were infected with syphilis, resulted, after five and a half small courses, in a complete cure of two animals, but in a third rabbit this amount of treatment was not sufficient, for the inoculation test with material from the spleen and lymph glands was positive. The skin into which this ointment was rubbed showed rhagades and crusting, and the inoculated animals lost weight. Inunction with a colloidal preparation of mercury gave a better result, for the three animals thus treated did not show any signs of syphilis, and inoculation of their organs produced a negative reaction.

In another group of rabbits inunctions were started twenty-one days after cutaneous inoculation. Also in this experiment the effect of a colloidal preparation of mercury proved better than that of mercury ointment, for one out of three rabbits treated with mercury ointment was not completely cured, as the inoculation test with material from its organs showed, while three rabbits, treated with a colloidal preparation of mercury showed no signs of syphilis, and inoculation with material from their spleen and lymph glands gave a negative result. Also the crusting dermatitis and generalized disturbances produced by mercury ointment were absent or slight when a colloidal preparation of mercury was used.

THE EFFECT OF INUNCTIONS WITH A COLLOIDAL PREPARATION OF MERCURY IN RABBITS INOCULATED INTRACUTANEOUSLY WITH SYPHILITIC MATERIAL. HOJI KO, Lues: Bull. Soc. japon. de syph. **12**:86 (April) 1935.

The author's experiments proved that inunctions with a colloidal preparation of mercury had a greater antisyphilitic effect than treatment with a 33 per cent concentration of mercury ointment. Also the irritation of the skin was less marked when a colloidal preparation of mercury was used.

BLOOM, New York.

Society Transactions

ATLANTIC DERMATOLOGICAL ASSOCIATION AND NEW ENGLAND DERMATOLOGICAL SOCIETY

J. HARPER BLAISDELL, M.D., *Secretary*

Boston, Nov. 9, 1935

WILLIAM P. BOARDMAN, M.D., *Chairman*

MORPHEA. Presented by DR. C. GUY LANE, Boston.

B. E. M., a woman aged 27, suffered a severe sunburn ten years ago, after which the first area of scarring appeared. The next lesion appeared near a vaccination scar on the left arm. Other areas have become involved since that time. No symptoms of any kind have been noticed. There is no history of injury. A hysterectomy for fibroids was performed in 1933. The ovaries, however, were not removed.

The dermatosis is located on the left arm and left scapular region. Over the latter areas are pinkish and bluish-gray areas, many of which are slightly depressed; the areas are arranged roughly in linear fashion. The centers of some of the areas are white, almost lardaceous, and much firmer than the other portions. The basal metabolic rate was reported to be + 6 per cent. No other laboratory tests have been made.

DISCUSSION

DR. S. S. GREENBAUM, Philadelphia: In studying disorders of this sort chemical studies of the calcium content of the blood and skin would be of interest since Leriche expressed the opinion and appears to have shown that sclerodermatous states represent end-results of parathyroidism.

DR. HARVEY P. TOWLE, Boston: I wish to draw attention to the etiologic point of view. This is the third case in which it is emphasized that there has been a preexisting sunburn. In three different conditions sunburn was regarded as an etiologic factor. How can one explain the fact that one agent can produce three such different results?

LEUKAEMIA CUTIS. Presented by DR. M. J. MORRISSEY, Hartford, Conn.

F. F., a man aged 57, an Italian, a laborer, was first seen in 1928, at which time he presented an eczematoid lesion on the right leg which was diagnosed as eczema of unknown origin. Four roentgen treatments of one-fourth skin unit were given at weekly intervals; this partially cleared up the plaquelike lesions but had no effect on the involvement of the right leg or of the glands. Shortly afterward the lesions developed on the face. Later those in the axillae and on the trunk appeared, and last year lymphangitis and adenopathy of the right leg and inguinal regions became manifest. The swelling of the right leg is extensive.

The middle portion of the forehead presents a plum-colored nodular lesion 3 inches (7.5 cm.) long and 2 inches (5 cm.) wide. On either side of the nose are two similar lesions as large as a lima bean. The axillae present plaquelike lesions with infiltrated borders. There are several plaques on the trunk. The right leg shows extensive lymphangitis with scaly thickening below the knee. Over the latter area are numerous ulcerations. There is marked adenitis in both inguinal regions. There is also an isolated lesion the size of a 25 cent piece on the inner side of the left foot. Itching is severe.

Examination of the blood shows a hemoglobin content of 92 per cent (14.5 Gm. per hundred cubic centimeters), 4,600,000 red cells and 7,900 white cells. The results of the differential count were as follows: neutrophils, 78 per cent; lymphocytes, 16 per cent; large mononuclears, 5 per cent; eosinophils, 1 per cent; basophils and myelocytes, none. There was no evidence of achromia, polychromatophilia; stipple cells or blastomycetes; the variation in size and shape of the cells was normal. Two hundred cells were counted.

DISCUSSION

DR. HARRY M. ROBINSON, Baltimore: It is my impression that this patient's disorder is not leukaemia cutis. I suggest the diagnosis of lymphoid sarcoma.

DR. FRANCIS A. ELLIS, Baltimore: Dr. Ketron and Dr. Gay of Baltimore reported a case of leukaemia cutis in which there were cerebriform lesions on the face, as in this case. The blood showed no changes which were diagnostic until shortly before the patient's death.

DR. J. FRANK FRASER, New York: I think that this patient's disorder belongs in the group of lymphoblastoma. The character of the cells, their resemblance to normal lymphocytes and the absence of mitosis support the diagnosis of leukaemia cutis rather than that of lymphosarcoma.

EXFOLIATIVE DERMATITIS. Presented by DR. MYER MAURICE TOLMAN, Chelsea, Mass.

This man, aged 57, a leather worker, has had his eruption since January 1935. He worked at sorting leather for the past twenty-five years. No new processes have been used in the factory during the past three years. The patient states that he went on periodic alcoholic debauches which sometimes lasted two months. In January 1935 (ten months ago) after a two months' debauch erythematous scaling lesions appeared on the right buttock and in the right antecubital fossa. At that time a patch test with leather was negative. The dermatitis gradually became generalized, and seven months ago the patient was admitted to the Brockton Hospital, Brockton, Mass. During the past seven months scaling has occurred several times, and the eruption has become progressively more pigmented. While he was in the Brockton Hospital the patient apparently had a bilateral involvement of the inguinal glands which suppurated and finally healed. He was transferred to the Massachusetts General Hospital in August 1935.

The skin of the entire body is deeply pigmented and thickened; in some areas it is scaling and lichenified. There are fissures and cracking in the antecubital and popliteal spaces. There is a similar pigmentation of the mucous membrane of the mouth. There is almost complete loss of hair. Several scars are present in the inguinal regions.

Urinalysis gave negative results. The blood count was normal except for the fact that it showed slight secondary anemia; the smear showed eosinophilia, the percentage of eosinophils being 13 per cent. Examination of the stool and repeated Hinton and Wassermann tests gave negative results. Chemical examination of the blood showed nonprotein nitrogen 19 mg. per hundred cubic centimeters. The sugar content of the blood during fasting was 90 mg. per hundred cubic centimeters. Determination of arsenic in the urine gave negative results. The basal metabolic rate was + 20 and — 7 on two occasions. Biopsy of skin from the axilla showed chronic inflammation. A lymph node showed a chronic inflammatory reaction with numerous deposits of pigment containing no iron.

The patient had several infected teeth removed; he was treated with bland ointment; roentgen therapy and administration of sodium thiosulfate have been started.

DISCUSSION

Dr. William P. Boardman, Boston: When arsenicals were first used in the treatment of syphilis, I saw some cases of localized and some cases of fairly generally distributed pigmentation in which the disorder lasted many months. In all it cleared up finally. Since the first few years of arsenical therapy, I do not recall seeing a single case. More arsenic is given than formerly, but cases of such pigmentation no longer occur.

Dr. Meyer Maurice Tolman, Chelsea, Mass.: This patient has received no arsenic at any time.

Dr. J. Frank Fraser, New York: I wish to ask Dr. Tolman whether there is a history of ingestion of a silver preparation.

Dr. Harvey P. Towle, Boston: I asked the patient if his last debauch was worse than the others. He answered, "No, just the same." Surely alcohol may here be justifiably looked on as a contributing factor.

Dr. J. Frank Fraser, New York: A point against the diagnosis of arsenical pigmentation is the involvement of the mucous membranes.

Dr. Fred Wise, New York: Is not part of the discussion beside the point? This is an alleged case of dermatitis exfoliativa of unknown etiology. It has nothing to do with silver or bismuth.

Dr. S. S. Greenbaum, Philadelphia: My co-workers and I have seen a number of cases of this sort at the Philadelphia General Hospital. I think, in view of the marked pruritus, thickening of the skin and marked generalized lymphadenopathy that this patient in all probability has a pernicious lymphoderma.

Dr. Harry M. Robinson, Baltimore: All cases of silver pigmentation from silver arsphenamine have occurred in patients to whom bismuth had been administered also. The question is whether the pigmentation on the buccal surface is from silver arsphenamine or from bismuth.

A Case for Diagnosis: Folliculitis Decalvans or Lupus Erythematosus. Presented by Dr. John G. Downing, Boston.

G. G., a youth aged 18, states that the hair on his scalp has been falling out continuously in various areas for fourteen months. On the top it falls out in patches, while around the fringe of the hair it comes out two or three hairs at a time.

At the vertex of the scalp there is a large patch of alopecia where the skin is pink, shiny and apparently atrophic. There are scattered smaller patches throughout the scalp. At the fringe of hair the patches are small and do not show the atrophy that is noted at the vertex. There is evidence of inflammation about the hair follicles.

The patient has received no treatment.

DISCUSSION

Dr. Fred Wise, New York: I believe the disorder is pseudopelade.

Dr. John G. Downing, Boston: I wish to ask Dr. Wise why he makes the diagnosis of pseudopelade and whether he made a close examination of the occipital region of the scalp?

Dr. Fred Wise, New York: The reason I think this is an example of pseudopelade is because of the absence of any visible signs of inflamed follicles. At the edges the lesion is smooth, atrophic and red, and the interior of the plaque is smooth, glistening and atrophic.

Dr. V. C. Garner, Philadelphia: I recently had occasion to review the monograph by Photinos on pseudopelade. The picture in this case corresponds perfectly to his description, including the glassy sheaths seen about the hair bulbs after extraction.

Dr. J. E. Gately, Baltimore: I think the arrangement of the hair as isolated tufts is rather typical of pseudopelade. In cases of lupus erythematosus there is usually a scar devoid of hair.

Schamberg's Disease. Presented by Dr. William J. MacDonald, Boston.

H. S., a man aged 54, a fireman, has had a dermatosis on the legs for the past two years. He states that he has no venereal disease. He occasionally takes a proprietary emulsion of liquid petrolatum with agar and phenolphthalein. The cardiovascular, respiratory and urinary systems are normal.

On the anterior, lateral and posterior surfaces of both legs there is a nonelevated, noninfiltrated eruption. On the left leg the involvement is more extensive than on the right. The eruption consists of tiny bright red puncta, resembling grains of Cayenne pepper, with peripheral brownish pigmentation but no sign of purpura. Between the pigmentary areas there are atrophic areas. There are no subjective symptoms. The skin is somewhat dry and scaly. There is almost complete loss of hair on both legs. There does not appear to be any formation of rings. In short, the eruption resembles grains of Cayenne pepper surrounded by pigmentary lesions.

The Wassermann test was negative. There has not been time to make a biopsy. The patient has received no treatment.

Boeck's Sarcoid with Lesions of the Bones and Lungs. Presented by Dr. W. J. MacDonald, Boston.

E. M., a woman aged 42, has ten children living and well. She also has three brothers and six sisters who are alive and well. One sister died of pulmonary tuberculosis. The patient has lived a temperate life and is not addicted to smoking.

Fifteen years ago she suffered from an axillary abscess. This was followed by "pain in the shoulders, arms and back" which was diagnosed as rheumatism. After this attack the fingers became swollen, red and painful. This condition has persisted and is still present. Eleven years ago the patient noticed pigmented lesions appearing on the arms. They remained. One year later similar lesions appeared on the face. Similar lesions gradually developed on the body and legs.

On the face is a livid blue nonelevated, slightly infiltrated eruption associated with numerous nasal telangiectases on both cheeks. Identical lesions are present on the forehead. On both forearms, and to a lesser extent on the remaining portions of the arms, are slightly raised, infiltrated, atrophic, livid blue lesions of irregular size. There is no pain or pruritus. On the back are discrete lightly pigmented, slightly elevated, moderately infiltrated lesions which cause no subjective symptoms. There are livid blue lesions around the anterior surface of the right knee. The anterior surfaces of the legs present atrophic areas, which the patient ascribes to exposure to heat when she was accustomed to sit before a fire in Ireland. The fingers are enlarged and clublike, showing evidence of swelling of the soft tissues. The nails show atrophic changes. The skin is smooth and fine; there are increased sweating and weakness on pressure. The proximal phalanges are enlarged. The nails are fissured and show marked destruction. Several nails have been lost.

The alimentary system was normal. There was no jaundice or diarrhea. The liver and spleen were not palpable. There was shortness of breath on exertion and also cough. Auscultation revealed râles over the anterior aspect of the right portion of the chest. The breath sounds were loud and distinct. No râles were heard over the left lung. There was no hemoptysis at any time. The sputum contained no tuberculosis organisms. The circulatory system and the nervous system were normal. The urinary system was also normal, and the urine contained no albumin or sugar. The Wassermann reaction of the blood was negative.

Biopsy showed that sections of lesions from the face and arm were identical. They consisted of circular masses of macrophages with lymphocytes at the periphery. No giant cells or caseation was present. There was dense connective

tissue in the corium. There was slight hyperkeratosis in some areas, a feature consistent with Boeck's sarcoid.

Stains for tuberculosis showed no evidence of that disease in the section.

DISCUSSION

DR. FRANCIS A. ELLIS, Baltimore: The successive changes in this disease are striking. Schaumann has stressed the involvement of the lymphoid tissue, liver, spleen and bones. The changes in the bones originate in the haversian canals. Because the lesion on the nose is macular, as are the other cutaneous lesions, I believe that the disorder should be diagnosed lupus pernio. Histologically lupus pernio and sarcoid are the same. Jüngling called the osseous changes osteitis tuberculosa multiplex cystoides and stressed the lack of extension through the periosteum. My co-workers and I have found these osseous changes in two cases of true tuberculosis cutis, and in one case we were able to obtain biopsy material from one finger. In those sections the periosteum could not be identified. No tuberculin test has been made in Dr. MacDonald's case; I should expect the reaction to be negative. The cystlike changes in the soft parts of the involved fingers are interesting.

MULTIPLE BENIGN SARCOID. Presented by DR. MILDRED L. RYAN, Brockton, Mass.

S. S., an Armenian woman aged 30, first noticed a spot on the left side of her neck three years ago. It gradually increased in size. Since that time other lesions have appeared on the upper portion of the back and arms, on the buttocks and, more recently, on the face. In the last few months the lesions have become much more numerous. There has been no ulceration.

On the face, neck, arms, upper portion of the back, chest and buttocks are scattered papular, nodular and infiltrated lesions intimately connected with the skin and moving with it. Some of the lesions show telangiectases. They are pink and reddish purple. Most of the tumors seem much smaller on sight than they are on palpation. When she was seen in April, the patient had twenty-six lesions on the right arm, fourteen on the left arm, scattered lesions on the back, three under the right eye, one near the left eye and one on the left side of the neck. The areas varied in size from about 0.5 to about 1.5 cm. in diameter. There was a vascular area about 1.2 cm. in diameter on the lower lip.

The blood count showed 70 per cent hemoglobin and 8,800 white cells. The results of the differential count were as follows: polymorphonuclears, 80 per cent; large lymphocytes, 5 per cent; small lymphocytes, 11 per cent; transitional cells, 4 per cent.

The biopsy showed sarcoid.

The patient received a solution of potassium arsenite off and on; puffiness of the eyelids appeared after only a few drops was given. Administration of cod liver oil, general hygienic treatment and ultraviolet irradiation have also been included in the treatment. The lesions had improved slightly when the patient was last seen, in July 1935.

The patient is presented for suggestions as to treatment.

DISCUSSION

DR. FRED WEIDMAN, Philadelphia: From the histologic sections the disease appears to be definitely tuberculosis. It is true that the arrangement of the tubercles approaches that seen in sarcoid, but one must admit that clinically the picture is not that of Boeck's sarcoid; the lesions are extremely deep seated. It would indeed be worth while to inoculate guinea-pigs. In short, the decision lies between true tuberculosis and a most unusual example of Boeck's sarcoid. I believe that the disorder is true tuberculosis.

DR. LEE MCCARTHY, Washington, D. C.: I agree with Dr. Weidman and hardly believe the condition to be sarcoid of Boeck. I think it should be classified as tuberculosis cutis, for the histologic picture is more characteristic of true tuberculosis than of sarcoid.

Dr. S. S. Greenbaum, Philadelphia: Was anything done to the lesions which would explain the central scarring seen in many of them? If that scarring occurred spontaneously there appears to be no reason for not considering the condition a disseminated miliary lupus of the face.

Dr. Mildred L. Ryan, Brockton, Mass.: I saw this patient about the middle of July. The lesions have definitely improved; they are now only one half their original size, and some have disappeared. Nothing has been done to the lesions.

Hereditary Syphilis (Second Generation). Presented by Dr. William P. Boardman, Boston.

D. R., a woman aged 26, states that her husband is living and well. Her first pregnancy resulted in a syphilitic child, who is presented; the second pregnancy terminated in a miscarriage at four months, in 1932. The patient had interstitial keratitis in November 1933.

There is a scar on the right eye from an old keratitis; the upper middle incisors are peg-shaped (screw-driver shaped). The first upper molar on the right is missing; the other molars are carious and broken off down to a line just distal to the gums. The palate is rather high arched. The frontal and parietal bosses are rather prominent.

The patient's husband has a negative Wassermann reaction.

The patient's Wassermann reaction was positive in July 1933, in October 1934, and is still positive at present.

She received treatment with bismuth in October 1934 and irregularly thereafter. The keratitis has cleared up, leaving a scar in the right eye.

Hereditary Syphilis (Third Generation). Presented by Dr. William B. Boardman, Boston.

R.R., a boy aged 4½ years, the son of D. R., has a large head with dome-shaped forehead and prominent parietal bosses, a saddle-back nose, a high-arched palate and poor teeth. Roentgenograms of the skull and of all the bones of the extremities show no abnormalities. The ophthalmologic examination also gave negative results. The pupils, tension and disks were not remarkable.

The Kahn test was positive in October 1934 and is still positive.

The patient had received sulfarsphenamine irregularly since October 1934.

The boy was examined on account of the mother's having congenital syphilis and is presented as possibly having syphilis in the third generation.

Hereditary Syphilis (Third Generation). Presented by Dr. William B. Boardman, Boston.

A. D., a woman aged 45, the mother of D. R., states that her husband was an alcoholic addict and that he died suddenly a short time after an attack of pneumonia, at the age of 35. The patient has no symptoms, but she has been examined because her daughter has hereditary syphilis. There is no history of early syphilis.

There is a murmur over the aortic area with sharp aortic second sound.

The Kahn test was weakly positive. The Hinton test was positive.

The patient has received no treatment.

DISCUSSION

Dr. Harry M. Robinson, Baltimore: My co-workers and I have observed about eight cases of more or less definitely proved syphilis of the third generation. These occurred so infrequently that we usually tell patients with congenital syphilis that there is little fear of transmitting their condition to their offspring. I have never observed a case in which a male patient with congenital syphilis had transmitted the disease to his wife. In all cases in which congenital syphilis has been transmitted the transmission has been from mother to child.

Dr. C. Morton Smith, Boston: I have believed in the possibility of syphilis in the third generation, though I have never observed a case. I have been able to follow up several congenitally syphilitic patients from babyhood to motherhood, and in no case has there been evidence of syphilis in the third generation. Transmission to the third generation is difficult to prove, for acquired syphilis in the second generation must be excluded. A fresh infection, or superinfection, in the second generation I regard as possible, as, I think, the following case, which occurred many years ago in the practice of the late Dr. Abner Post, illustrates:

Dr. Post had treated the parents and had diagnosed congenital syphilis in their baby girl, who later showed interstitial keratitis and Hutchinson's teeth. At the age of 18 there developed in the girl a typical clinical primary lesion of the lip with accompanying glandular enlargement, and, later, a typical secondary eruption, followed a few years later by characteristic discrete scaly, papular syphilids of the palms, which yielded only to injections of arsphenamine. Before the appearance of the primary lesion the girl had taken part in amateur theatricals in which she was kissed by the hero of the play, who was subsequently found to have infectious syphilis. The lesion on the lip appeared after the usual period of incubation. The manifestations of typical acquired syphilis in a person with congenital syphilis were present. The patient was under my care for several years with the manifestations of late stages of syphilis. Dr. Post considered this case to be unquestionably one of an acquired chancre in the case of a congenitally syphilitic patient.

Dr. Harry M. Robinson, Baltimore: I have never seen a case of proved superimposed syphilitic infection. I do not see how one can say that a lesion was a manifestation of primary syphilis in a syphilitic patient unless the earlier syphilis had been proved by repeated Wassermann tests and the superimposed chancre proved by demonstration of Spirochaeta pallida.

Dr. F. J. Eichenlaub, Washington, D. C.: I believe I have seen one patient with congenital syphilis in whom a penile chancre later developed, spirochetes being demonstrated in the lesion.

Dr. Robert L. Gilman, Philadelphia: The burden of proof rests with the proponents of syphilis of the third generation. I believe that further investigation and more information about the child's father should be obtained, as this constitutes the weak link in the chain. As far as the incidence is concerned, I have not had Dr. Robinson's experience in Philadelphia; no case of syphilis of the third generation has been presented or reported to my knowledge in the past ten years.

A Case for Diagnosis (Poikiloderma Vasculare Atrophicans?). Presented by Dr. John G. Downing, Boston.

B. D., a Lithuanian woman aged 40, states that the eruption started about seven years ago on the right forearm; it persisted and became worse in the winter, when on exposure to cold her skin became reddish blue and cracked. At that time the patient was told that she was suffering from eczema. About three years ago her right hand became involved, especially in the cold weather. At about that time, she also noticed that she perspired only on her face and under her breasts. She did not perspire on her hands or feet. Five months ago she noticed a similar condition beginning on her right leg and on her left arm. At times her right hand became swollen, especially when she was doing any work. She had no pain, tingling or muscular weakness in her right arm. However, lately the back of her right leg has begun to pain and ache. She describes the pain as a "crawling" sensation. She has had no other cutaneous disorder except that about three years ago she suffered from a generalized urticaria. Except for that her past history is irrelevant. Her general physical condition is also normal. Her liver was 1 fingerbreadth below the costal margin.

The skin of the entire body is drier than normal. This dryness is somewhat accentuated on the right arm and right leg, which have a rather shiny, scaly appearance. This is most marked on the right arm, which is shiny and dry, has

a more or less reddish tinge and exhibits slight scaling. This begins just below the shoulder and has the appearance of what is usually described as a roentgen ray dermatitis. Atrophy, tiny pigmented spots and fine telangiectases are present. The condition is most marked on the dorsum of the hand. The right leg shows erythema, with accentuation of the normal cutaneous markings and a dry, glistening appearance. The left arm shows erythema which varies from time to time. The left leg, except for slight dryness, is apparently normal.

A neurologic examination made while the patient was in the hospital gave negative results except for slight weakness of the right forearm.

The patient was studied at the Thorndike Memorial Hospital, and this report was made: The blood count showed 101 per cent hemoglobin (Sahli), 5,590,000 red cells, and 7,900 white cells. The results of the differential count were as follows: polymorphonuclears, 85 per cent; lymphocytes, 8 per cent; mononuclears, 6 per cent; basophils 1 per cent. The Kahn test and urinalysis gave negative results. The basal metabolic rate was — 16 per cent.

Roentgen examination of the chest showed chronic bronchitis; roentgenograms of the arms and hands showed no changes in the bones.

Biopsy showed atrophy of the epithelium and corium, the latter being infiltrated diffusely and somewhat sparsely with plasma cells and lymphocytes. There was no hyperkeratosis. The picture was not especially diagnostic.

Dr. H. H. Merritt, visiting neurologist, made the following note:

"There is some weakness of the muscles of the shoulder girdle. The cutaneous disorder may be related to the vegetative nervous system, and also this may be a beginning myopathy."

Some observations made after intradermal injections of histamine hydrochloride and epinephrine hydrochloride did not deviate much from the normal: 1. Two hundredths cubic centimeter of a 1:2,000 solution of histamine hydrochloride was injected intradermally in the dorsum of the right and left arm 3 inches (7.5 cm.) above the wrist. The wheal and flare on the right was slightly larger than that on the left. Bleeding was more profuse from needle trauma, and reactions appeared more quickly in the right than in the left arm. 2. One-tenth cubic centimeter of a 1:1,000 solution of epinephrine hydrochloride injected 9 cm. above the wrist on the dorsum of both arms produced a blanching centrally and a flare peripherally, the wheal being of the same width as that produced by histamine. Blanching was less distinct on the right but extended over a larger area than on the left arm. Blanching on the right arm seemed to follow definite pathways, probably lymphatics, and extended for 6, 4 and 4 cm. in three distinct pathways. On the left arm the blanching was more localized and intense and extended up the arm for 2.5 cm.

The cutaneous temperatures were obtained over similar areas of the right and left hands, fingers and arms by means of a thermocouple; the readings were essentially the same on the two sides and were within normal limits.

A measurement of the cutaneous resistance showed the reactions in the two arms and hands, including the fingers, to be essentially the same and within normal limits.

Determinations of the blood flow were carried out by means of the Landis test, and the results were within normal limits in the diseased and in the normal extremities. This test consisted of immersing the left leg in warm water kept constantly considerably above room and body temperature. Then by means of a thermocouple determinations of the cutaneous temperature of the right leg were made. Normally, vasodilatation resulting from the heat takes place in all extremities and there is an elevation of temperature. When there is an arterial spasm due to a pathologic vasomotor reaction vasodilatation does not take place and the temperature does not go up.

Whereas the patient had sweating of the normal leg, arm, abdomen and face, little sweating of the affected extremities was shown by the Landis test. This was considered abnormal.

Direct examination of the capillaries of the fingers by means of a microscope showed them to be normal.

DISCUSSION

DR. PAUL E. BECHET, New York: In my opinion the eruption does not resemble poikiloderma atrophicans vasculare. I had occasion to observe the cases reported by the late Dr. John E. Lane and one or two authentic cases at the old New York Skin and Cancer Hospital. In all these cases there were lesions characteristic of that disease; such lesions are not present in this case. I suggest the diagnosis of acrodermatitis chronica atrophicans as more probable.

DR. FRED WISE, New York: I agree with Dr. Bechet's diagnosis of acrodermatitis chronica atrophicans. I think the patient presents practically all the characteristic signs of that disease.

RECKLINGHAUSEN'S DISEASE. Presented by DR. E. LAWRENCE OLIVER, Boston.

F. H., a man aged 24, has always been somewhat retarded mentally. Five years ago he suffered from slight headaches starting in the occipital region and radiating to the vertex. Four years ago he was frightened by lightning and suffered loss of sight and hearing which lasted for two weeks. A tumor, microscopically diagnosed as myxoliposarcoma, was removed from the left leg eleven months ago. The patient was examined in the neurologic department in February 1935, and the following results were reported: His mental age was 8½ years; the right palpebral fissure was greater than the left. There was weakness of the right side of the face; the mouth was pulled to the left; a positive Babinski and a positive Hoffmann sign were present on the left. The fundi were normal.

There are many soft, pale blue tumors of the skin on the chest and back. There are many soft, nonpigmented tumors of the skin and numerous café au lait areas.

The pathologic report on Jan. 9, 1935, stated that there was a mass of tissue 24 by 15 by 4 cm. in size covered partly with skin. On section the tissue was pale yellow, slimy and moderately firm and showed numerous fibrous strands. There were some firmer nodules, and numerous blood vessels ran through the tissue. The microscopic diagnosis was lipomyxosarcoma.

A section of an elliptic piece of skin 16 by 6 cm. taken from the left leg on Oct. 1, 1935, showed underlying fatty tissue 2.5 cm. in thickness. A section revealed diffuse growth of homogeneous fibrous tissue with a few scattered lobules of fat. There was no definite boundary to the unusual fibrous growth, which apparently extended to the circumference of the specimen. The microscopic diagnosis was probable lipomyxosarcoma, possibly originating from neurofibromatosis.

RECKLINGHAUSEN'S DISEASE. Presented by DR. E. LAWRENCE OLIVER, Boston.

M. S., a woman aged 31 has had recurring eczema of the prurigo type for the past twenty-six years and attacks of asthma, sometimes associated with recurrence of eczema, for the past twenty-two years. When the patient was a child, pigmented areas of café au lait type were noted. An increasing number of neurofibromas have developed in the past seven years.

There are generalized, typical eczematoid lesions, erythematosquamous areas with thickening and lichenification, pigmentation and neurofibromas on the back and many small soft cutaneous tumors and areas of café au lait pigmentation.

The chemical examination of the blood and the Hinton and Wassermann tests gave negative results. A complete blood count showed no abnormalities except for eosinophilia. Several roentgenograms of the chest showed evidence of healed fibrous tuberculosis and some bronchiectasis. A biopsy of a cutaneous tumor showed the structure of neurofibroma.

The eczema has been treated with the usual ointments and with ultraviolet and roentgen radiation. On different occasions allergic studies have been made, but no definite etiologic agent has been found.

RECKLINGHAUSEN'S DISEASE. Presented by DR. E. LAWRENCE OLIVER, Boston.

C. I., an Italian girl aged 7 years, has two pigmented areas on the back and a papulovesicular eruption on the dorsa of the arms and forearms and on the anterior aspects of the thighs. The pigmented areas have been present for a number of years. The recurrent intermittent papulovesicular eruption on the dorsa of the arms and forearms and on the anterior aspects of the thighs and a papular eruption on the chest have been present for eight months.

The patient's mother has had two cutaneous tumors, and a sister and brother had similar pigmented areas.

There is a café au lait spot 1.5 by 0.5 cm. on the lower, and a similar smaller area is present on the right side of the upper portion of the back.

A biopsy showed fibrolipoma.

The eczema subsided after application of a coal tar preparation.

RECKLINGHAUSEN'S DISEASE. Presented by DR. E. LAWRENCE OLIVER, Boston.

A. I., a boy aged 1 year, at 3 months of age showed small café au lait areas over the lower portion of the back. These areas have increased in size, and similar ones have appeared elsewhere on the body. The mother has cutaneous tumors of the left axilla and left thigh and a pigmented area on the left forearm. A sister has two pigmented areas on the back.

DISCUSSION

DR. FRANCIS P. MCCARTHY, Boston: It is interesting to know the time that elapses between the formation of a true tumor and the first appearance of café au lait lesions. I saw a girl about ten years ago who showed extensive café au lait macular lesions; I had an opportunity of seeing her a few weeks ago and at that time she had well developed generalized fibromatous lesions. It took all these years before the actual tumors appeared. This patient also showed a moderate degree of mental deficiency.

DR. BERNARD APPEL, Boston: To further corroborate the possibility of intracranial lesions, I wish to refer to a patient in the Boston City Hospital who has facial asymmetry and exophthalmos probably caused by a tumor.

XANTHOMA TUBEROSUM MULTIPLEX. Presented by DR. G. MARSHALL CRAWFORD, Boston.

C. H. B., a man aged 30, a chemist, states that small, tender, yellow spots appeared on the elbows and palms two and one-half years ago. The eruption has gradually spread to the present locations, i. e., to the hands, elbows, knees, soles and buttocks. The lesions have increased in size as well as in number, and they show a tendency to coalesce, forming fewer and larger lesions. There are no associated symptoms. When he was first seen the patient had tinea versicolor, proved microscopically, which was of interest in that there was a deep orange pigmentation in the lesions. There is no history of a similar disturbance in the family. The patient has undergone a complete medical examination, the results of which have been entirely negative.

There are raised lesions from the size of a pinhead to patches measuring 0.5 cm. in diameter in the aforementioned areas; these patches have a distinctly yellow color. On the palms they tend to show a linear distribution along the creases of the skin. The lesions are more prominent in areas subjected to pressure. Some of the more recent lesions, notably those on the back and hands, show a bluish cast.

At the patient's first visit the total cholesterol content of the blood was 900 mg. per hundred cubic centimeters, the percentage of cholesterol ester being 53 and that of free cholesterol 47 per cent. Monthly check-ups have shown a variation, the total cholesterol content being sometimes as low as 308 mg. but amounting on the average to from 600 to 700 mg. per hundred cubic centimeters. The sugar content

of the blood was 64 mg. per one hundred cubic centimeters. Monthly check-ups showed an average of 70 mg., the highest reading being 85 mg. of sugar per one hundred cubic centimeters of blood.

Biopsy showed typical xanthoma.

A section is presented.

The patient has been given a low fat and low cholesterol diet; he has also received bile salts for four months and thyroid for six months. Examination of the thyroid gland has been reported to give negative results, and no studies of the basal metabolic rate have been made.

DISCUSSION

DR. FRED WEIDMAN, Philadelphia: All that I want to comment on is the remarkable yellow color of the lesions; they are orange yellow. In this connection, the history states that the patient has received a restricted diet; this probably means increased intake of vegetables containing carotene or at least its relative xanthophile. In fact, the patient states that the yellow color has been more marked since he received a diet with high vegetable content. From the cosmetic angle, if for no other reason, it may be worth remembering that if the conspicuous yellow color is to be avoided it is advisable to avoid the ingestion of carrots and similar foods rich in carotene.

DR. BERNARD APPEL: My patient certainly had a marked pigmentation. It was almost orange. She had carotene in the blood.

A CASE FOR DIAGNOSIS (PARAPSORIASIS? PREMYCOTIC STAGE OF MYCOSIS FUNGOIDES?). Presented by DR. J. H. SWARTZ, Boston; DR. C. MORTON SMITH, Boston, and DR. HARVEY P. TOWLE, Boston.

J. W., a woman aged 35, has had an eruption for six years covering the entire body except the face, palms and soles. It is most marked on the abdomen, buttocks, back and flexor surfaces. Areas in which seborrhea usually develops are not involved. The lesions first appeared under the breast six years ago, spreading thence to the trunk, the flexor surfaces of the arms and the inner surfaces of the thighs and gradually involving most of the body except the face, palms and soles. The lesions do not itch, but they burn. There is some scaling but no fissuring or weeping. There are no constitutional symptoms.

There is a fairly generalized dermatitis on the trunk, inner aspects of the arms, buttocks and thighs. The lesions are irregular, indefinite, superficial and scaling, and eczematous areas are present. Some lesions are dry and have an erythematous background. The presence of telangiectasia and apparent atrophy in some areas gives an appearance of poikiloderma atrophicans vasculare. The dorsa of some of the phalanges show follicular enlargement.

The urinalysis gave negative results. The blood count showed 8,000 white blood cells, 4,300,000 red blood cells and 80 per cent hemoglobin. The red blood cells were normal in size and shape. The results of the differential count were as follows: 70 per cent polymorphonuclears, 22 per cent lymphocytes, 6 per cent mononuclears and 2 per cent eosinophils.

A guaiac test of the stools gave negative results. The Hinton test was negative. The calcium content of the blood was 9.8 mg. per hundred cubic centimeters; the phosphorus content was 2.68 mg.; the nonprotein nitrogen, 26 mg., and the plasma protein, 6 mg. The sugar content of the blood during fasting was 81 mg. per hundred cubic centimeters. The basal metabolic rate was —10 on two occasions.

Roentgen examination of the teeth gave negative results; that of the sinuses showed slight haziness in both antrums; that of the chest gave negative results except for slight general enlargement of the heart. An enema with barium sulfate disclosed no abnormalities. A series of roentgenograms of the gastro-intestinal tract revealed no abnormalities except for a small hernia of the cardiac end of the stomach through the esophageal hiatus. The Graham test was negative.

The patient was treated with sulfur ointment and later with coal tar ointment, but no improvement resulted.

DISCUSSION

Dr. Fred Wise, New York: Judging from the clinical appearance, I should exclude parapsoriasis on account of the marked inflammatory reaction of all the lesions. On the basis of the infiltration of some of the lesions, i. e., of those on the buttocks and in the periaxillary spaces, and owing to the fact that there are distinct islands of healthy skin within the affected areas, I should venture a diagnosis of mycosis fungoides.

Dr. J. Frank Fraser, New York: I agree with Dr. Wise. I think that all the members have seen cases of mycosis fungoides in which itching was not present. Both the clinical and the microscopic picture support the diagnosis of mycosis fungoides.

Dr. Harvey P. Towle, Boston: I saw this patient once before. I was much intrigued by the combination of symptoms. I wonder whether or not the sudden adiposity which developed is significant in the etiology. The woman gained about 80 pounds (36.3 Kg.) in a short time. Strenuous efforts have been made to reduce her weight. So far all attempts have failed. Do not this sudden acquisition of surplus weight and the failure of all efforts to reduce point to some endocrine disturbance? A careful and complete investigation of metabolism might reveal some interesting facts which might be applied not only to an understanding of the accumulation of fat but to a better understanding of how the disease of the skin developed.

Dr. Eugene F. Traub, New York: Referring to the changes on the breast, I believe that this phenomenon may be observed not infrequently in patients undergoing a rather sudden change in weight. The lesions which appear atrophic really do not represent a true atrophy, nor is the apparent telangiectasia a fixed process; both types of lesions have a tendency to disappear. On clinical grounds, I believe that parapsoriasis can be excluded as a possibility in this case. I also doubt that the disorder will turn out to be mycosis fungoides. Many disorders of this character, supposedly in the premycotic stage, if followed, turn out to be chronic eczema.

Dr. E. Myles Standish, Hartford, Conn.: Could an atrophic condition of both breasts be accounted for by an acrodermatitis?

Purpura Annularis Telangiectodes (Majocchi's Disease). Presented by Dr. William J. McDonald, Boston.

M. W., a woman aged 76, states that for twelve years she has had an eruption on the lower extremities from the ankles to slightly below the umbilicus anteriorly and to about the level of the posterior superior iliac line posteriorly.

Her heart, lungs and gastro-intestinal system are normal, and her menstrual history is noncontributory.

The patient had been in good health and is active for her age. There is no history of ingestion of drugs at present, but formerly the patient frequently took proprietary laxative pills.

Posteriorly, anteriorly and laterally on the aforementioned areas of the body there is an eruption which is essentially macular, is not infiltrated to any appreciable degree and is barely elevated. The eruption is confluent, although there are many discrete macular pigmentary lesions. The general color of the eruption is rose-brown, i. e., it does not present the livid red hue seen in angioma serpiginosum. It is suggestively purpuric and telangiectatic.

The initial lesion appeared on the instep, a symptom consistent with purpura annularis telangiectodes (Templeton). Some of the lesions, especially those on the anterior aspect of the lower third of the leg and on the posterior aspect of the buttocks, are scaly. Atrophy of the skin, where present, is slight. There is loss of hair over the involved areas. (The age at which the eruption appeared is

inconsistent with the diagnosis of angioma serpiginosum.) Many of the lesions are definitely annular, showing clear centers. (Schamberg's progressive pigmentary dermatosis does not present annular lesions and is universally conceded to be restricted to males.) There are in some parts of the involved areas tiny bright telangiectatic rose-colored macules which are smooth and noninfiltrated. Many of these have progressed and developed into purpuric lesions, leaving definite straining or pigmentation from the deposits of hemosiderin.

The patient has marked pruritus. (Schamberg's disease and angioma serpiginosum produce no itching.)

The Wassermann test and urinalysis gave negative results.

The patient has received no treatment.

The patient is presented because of the comparative rarity of the disease. I wished also a confirmation of the diagnosis. I believe that the disorder is not progressive pigmentary dermatosis—because there are annular lesions—and that it is not angioma serpiginosum—because that disease is usually a disease of infancy or early adult life. I realize that in cases of purpura annularis telangiectodes there is generally a relatively short history, whereas in this case the disorder has gone on for twelve years.

DISCUSSION

Dr. Joseph M. Schildkraut, Trenton, N. J.: I think that the disorder is Schamberg's disease. There are crops of pinhead-sized puncta and pigmentation, features characteristic of progressive pigmentary dermatitis rather than of Majocchi's disease.

Dr. William J. MacDonald, Boston: The only reason I made a diagnosis of purpura annularis telangiectodes is that in Schamberg's disease there are no subjective symptoms. They are present in this case. I looked up Templeton's article (Arch. Dermat. & Syph. **16**:141 [Aug.] 1927), and his microscopic and macroscopic diagnoses fit in with the picture exhibited by this patient. The only feature which disagrees with Templeton's description is that in this case this disease has lasted about twelve years, whereas usually purpura annularis lasts only about one year. On the basis of the fact that this patient is a woman, I think the diagnosis of purpura annularis telangiectodes may be accepted.

Dr. E. Myles Standish, Hartford, Conn.: It was only within the last three or four years that more lesions have appeared, and the old lesions disappear when new ones develop.

Dr. Fred Wise, New York: A large group of diseases of this type has been studied and described by Gougerot and Blum, of Paris. The eruptions differ in many respects from Majocchi's purpura annularis telangiectodes. References to the literature may be found in an article by Wise and Wolf, on pigmented purpuric lichenoid dermatitis (Arch. Dermat. & Syph. **31**:445 [April] 1935).

Dr. S. S. Greenbaum, Philadelphia: I think that Schamberg himself would make a diagnosis of progressive pigmentary dermatitis. It would be interesting to know whether or not this patient shows the chemical change in the blood, namely, hypercholesteremia, which Schamberg reported as being present in three of his patients.

Dr. William J. MacDonald, Boston: There are no subjective symptoms except a violent itching. In Schamberg's disease there is no itching at all. Moreover, in Schamberg's disease there is no ring formation, but this patient exhibits definite ring formation, particularly on the lower extremities and on the inner aspect of the thighs.

A Case for Diagnosis (Congenital Syphilis? Hemiatrophy?). Presented by Dr. Austin W. Cheever, Boston.

This girl, M., is aged 6 years and 7 months. Four years ago her parents noticed a bald area on either side of the midline of the head. This progressed, and the

child became more and more bald. Soon a depression was observed at the sites mentioned. About three years ago the right side of the face began to atrophy in certain parts. This has progressed slowly up to the present. For the past three or three and one-half years the child has had persistently draining ears and has become somewhat deaf.

There is loss of hair on the head over an area to the right of the midline in the parietal and frontal region and over a small area to the left of the midline; the skin over these sites is smooth and white. There is a palpable depression underlying the areas of alopecia. Extending down the right side of the forehead is a linear area of atrophy of cutaneous and subcutaneous tissues. This also includes part of the right eyebrow, ala nasi and upper lip. There are no lesions elsewhere.

The urinalysis showed no albumin, casts or cells. The blood count showed 4,770,000 red cells, 13,500 white cells and 74 per cent hemoglobin. The blood smear gave normal results. A test with a 1 : 1,000 dilution of tuberculin was negative. The Wassermann reaction was reported by the family physician to be negative. The protein content of the serum was reported to be 7.1 Gm. per hundred cubic centimeters; the calcium content, 10 mg.; the phosphorus content, 4.8 mg., and the cholesterol content, 123 mg.

Roentgenograms of the chest showed no cloudiness; the sinuses were also clear. Roentgenograms of the skull showed no abnormalities; those of the mastoids showed slight thickening of the membrane, and those of the lateral aspect of the nose showed no abnormality of the bone.

DISCUSSION

DR. ROBERT L. GILMAN, Philadelphia: I believe this patient presents a prenatal defect and presumably congenital syphilis. She has a variety of the so-called minor stigmas. It is unusual that the apparent defect in the skull is not evident on roentgen examination. The child has prominent frontal bossae, the facies one ordinarily associates with congenital syphilis, a high-arched palate, defective dentition, hirsuties and telangiectasia, and she is mentally precocious. I suggest that further roentgen studies be made of the skull and long bones.

DR. WILLIAM P. BOARDMAN, Boston: I cannot believe that syphilis would cause that depression in the scalp and the hard, shiny surface without any previous ulceration.

DR. AUSTIN W. CHEEVER, Boston: I cannot tell whether the child has congenital syphilis or not. I saw her in consultation rather hurriedly. I do not know whether or not a test of the blood has been made. I cannot connect the condition of the scalp with congenital syphilis in any possible way. If she has congenital syphilis, she must have another disease also. If one can overlook the fact that some of the atrophy involves the left side of the scalp as well as the right, hemiatrophy seems the best diagnosis.

DR. HARRY M. ROBINSON, Baltimore: On superficial examination I see no evidence of syphilis. I have never seen such scarring as that presented by this patient to be caused by congenital syphilis, and the teeth do not appear to me to be of the Hutchinson type.

DR. J. HARPER BLAISDELL, Boston: The Wassermann reaction of the blood is negative.

DERMATOMYOSITIS. Presented by DR. HARVEY P. TOWLE, Boston.

D. W., a woman, has had an eruption for eleven years. It was preceded by a severe sunburn of the face. There was a gradual extension of the eruption until it covered the forehead, nose, cheeks and chin, leaving only small areas of normal skin. The symptoms are classic.

The patient has received various treatments by several physicians. In 1929 she had applications of carbon dioxide snow on the left side of the chin, which left

deep, scarred pits about ¼ inch (0.6 cm.) in diameter. She never received gold salts. The reaction of the skin showed too great sensitivity.

The patient was first seen on Nov. 13, 1934. Treatment since then has consisted largely of external application of aluminum acetate, following of a prescribed so-called alkaline diet and internal administration of sodium phosphate and sodium bicarbonate.

Progress has been extremely satisfactory. The eruption has receded until on the forehead, cheeks and nose just a tint of color and slight epithelial scaling are seen. The skin has become normal to palpation. Even on the areas where the color is now most apparent the skin feels soft and the color almost disappears on pressure. The lesion now present on the left cheek is comparatively new and exhibits more of the characteristics of a local vasomotor phenomenon than of an organized cellular reaction such as occurs in lupus erythematosus.

Intermittently there have been symptoms of disturbance in the gastro-intestinal tract such as loss of appetite, malaise, gas in the abdomen and disturbed and irregular defecation.

On Sept. 3, 1935, the patient presented herself with an abundant outbreak of herpes zoster on the right side just above the pelvis.

The interesting point is that mild external measures and attention to the gastro-intestinal disturbances produced more results than stronger external measures without attention to the internal conditions.

The patient is presented in order to determine whether there is any connection between the lupus erythematosus, the gastro-intestinal disturbances and the zoster.

DISCUSSION

Dr. William P. Boardman, Boston: I saw the patient before she came into the hospital, and at that time I made a diagnosis of lupus erythematosus. The patient exhibited beginning edema of the arms and lesions in the fingers that were typical.

Dr. Francis P. McCarthy, Boston: This patient is presented on account of the rarity of her disorder and the interesting development of signs and symptoms; the edema appeared after she left the Massachusetts General Hospital. The muscles involved are characterized by swelling, which has been generalized; at times the skin has been tense, particularly over the forearms and thighs, and recently a break in the continuity of the skin at the bend of the elbow and at the inner aspect of both thighs has resulted in a hernial protrusion of the subcutaneous fat. Microscopically the muscle fibers show all stages of degeneration, with edema of the skin and subcutaneous tissue and moderate cellular infiltration. The literature on this disease is meager, and the treatment has been unsatisfactory. I am using a preparation of amino-acetic acid. This treatment is being used extensively for an allied condition, myasthenia gravis. Some improvement has resulted since the beginning of this treatment. Muscular contractures are developing particularly at the bend of the elbows, and as the edema abates muscular atrophy appears. The original symptoms in this case, particularly the cutaneous eruption on the face together with the constitutional symptoms, suggested lupus erythematosus disseminatus, but the picture in the last few months is that of typical dermatomyositis.

Dr. Ray H. Rulison, New York: Has the possibility of trichinosis been excluded?

Dr. Francis P. McCarthy, Boston: Trichinosis can be excluded by the absence of the acute symptoms which usher in an attack; in this case the onset has been gradual. The absence of eosinophilia, the diffuseness of the process and the lack of localized areas of tenderness also tend to rule out that diagnosis.

Dr. J. V. Klauder, Philadelphia: I think this is the most interesting disorder seen today. The clinical picture is typically that of dermatomyositis. In this disease, akin to the myopathies, there is a disturbance of creatinine metabolism. After the administration of amino-acetic acid there is at first an increase in excre-

tion of creatinine; then a decrease occurs. I should like to know what the results of the study of creatinine metabolism were.

Dr. Francis P. McCarthy, Boston: The patient is taking from 15 to 20 Gm. of amino-acetic acid daily, and as this treatment is to be continued I shall be able to give a report later as to the value of the medicament. My co-workers and I are doing various laboratory tests with special reference to the creatinine content of the urine; it was high but has recently decreased. Ephedrine has been used in conjunction with amino-acetic acid.

Dr. S. S. Greenbaum, Philadelphia: This is the second patient with this condition that I have seen in the past four months. The other was at the Philadelphia General Hospital; that patient showed extremely marked asthenia plus persistent edema of the eyelids and an eruption closely simulating lupus erythematosus. My co-workers and I regarded it as generalized lupus erythematosus. It did not occur to me that it might be a dermatomyositis until I saw Dr. McCarthy's patient today. It is possible that the etiologic factors connected with lupus erythematosus are similar to those connected with dermatomyositis.

Dr. Francis P. McCarthy, Boston: Some mention has been made of sun rays as a factor in precipitating or aggravating various dermatoses that have been discussed here today. I think it is reasonable to assume that sun rays are definitely an exciting, irritating factor which produces a kind of trauma elaborating or provoking a cutaneous lesion, but there must be an associated endogenous factor, probably a toxin, which determines this reaction. Sun rays were apparently a factor in exciting the cutaneous reaction in the cheeks and eyelids in this case, thus simulating the onset of lupus erythematosus. There may be a relationship in the etiologic factor in both of these diseases.

Dr. Bernard Appel, Boston: I wish to corroborate Dr. McCarthy's statements. I saw a patient with classic dermatomyositis in whom the manifestations resembled those exhibited by Dr. Towle's patient, but to an exaggerated degree. The patient is going through classic progressive changes with contractures and gradually increasing weakness. Dr. Towle's patient was studied for a long time before the diagnosis was suspected. A urologist made a diagnosis of progressive muscular atrophy. The creatine content of the urine in the case I observed was consistently high, even when a meat-free diet was given, which is the important diagnostic feature in this case. I made arrangements to administer amino-acetic acid, but the patient was turned over to another physician.

D. W. N., a man aged 20, states that twenty-six months ago an ulcerative lesion developed on the dorsal surface of the right foot. This was thought to be an ordinary dermatophytosis and cleared up after two months of treatment with gentian violet and an ointment containing chloretone, salicylic acid and mercuric salicylate. As the lesion cleared up the present dermatosis over his right shin appeared, beginning as a small papule, which enlarged and ulcerated.

When I first saw the patient, in April 1935, there were two large ulcerative lesions. While he was receiving treatment the patient injured the left leg near the site of these lesions, and a third ulcer developed rapidly. The disease progressed at an alarming rate until the successful treatment which I shall describe was worked out. The ulceration increased, and sinuses were running in all directions from the ulcers. Fairly large areas of normal skin as they became infected became necrotic and disappeared.

There has been steady improvement since the present program of treatment was started. All the sinuses and one ulcer have completely disappeared. The other two ulcers are slowly progressing toward what is hoped will be complete clearing.

The present appearance of the dermatosis has been greatly modified by treatment. Originally, as shown in photographs, the lesions consisted of a deeply ulcerative process with much granulation tissue attempting to grow in. The distinctive feature of the lesions has been a peculiar fleshy, raised border which

merged with a greatly thickened comparatively normal skin. There has always been from a moderate to a large amount of granulation and pus filling up the crater of the ulcer.

Mycologic studies by Prof. William H. Weston Jr. and Dr. Norman F. Conant revealed Coccidioides. Cultural studies on artificial culture mediums as well as injections into guinea-pigs have thus far given negative results, largely on account of the fact that when these cultural studies were attempted successful treatment was already under way.

Cutaneous tests with coccidioidin have not yet been made because the material for this type of testing has just reached me from California. Complete roentgen studies of practically every bone in the body as well as of the lungs failed to reveal any focus of coccidioidal granuloma elsewhere in the body.

The patient has been subject to a chronic asthmatic bronchitis, but specimens of sputum have not revealed Coccidioides.

Treatment which failed to produce any demonstrable results was as follows: administration of large doses of potassium iodide by mouth, treatment with ammoniated mercury, tincture of metaphen, mercurochrome, potassium permanganate, etc., and ultraviolet and roentgen irradiation. Treatment which proved successful was as follows: strict rest in bed; a high vitamin diet reenforced with halibut liver oil, orange juice, yeast and liver extract, roughly, a sprue type of dietary modification; soaks with a 20 per cent solution of sodium thiosulfate, which produced impressive results at the point when the patient was losing ground rapidly, and sulfur ointment dressings.

Progress then ceased at a stage when there was an abundance of granulation tissues growing well above the level of the lesion but leaving an obviously active border. Further improvement was then brought about by superficial electrodesiccation, the operative field being anesthetized with a 10 per cent solution of cocaine in glycerin.

The patient is presented for suggestions regarding treatment.

Coccidioidal Granuloma. Presented by Dr. Perry C. Baird Jr., Boston.

F. A. H., a boy aged 13, on June 5, 1935, fell on a bench, bumping the anterior surface of the left leg. He said the fall caused a "dent" and made the site black and blue. In the middle of July he was brought to Boston with a temperature of 103 F. Examination at that time showed a reddened, extremely tender area approximately 8 cm. in length and 2.5 cm. in width over the junction of the middle and lower sides of the left tibia. This gave the impression of deep fluctuation. Roentgenograms of the anterior, posterior and lateral portions of the tibia showed no abnormalities.

In the middle of July an incision was made. There was an immediate outpouring of thick purulent material. The periosteum was thickened to apparently two or three times its normal thickness. The periosteum was incised, and the tibia was drained in three places. No pus exuded from the tibia. Convalescence was uneventful. The wound healed by second intention with clean granulation. The patient was returned to his local physician.

Early in September the patient was reexamined by Dr. William M. Shedden, who performed the original operation. He found the lesions which are now present.

Mycologic studies by Prof. William H. Weston Jr. and Miss Sarah M. Cousins revealed Coccidioides. Attempts are being made to culture the organism. Roentgenograms of the long bones as well as of practically every bone in the body showed no focus of coccidioidal granuloma in any other part of the body.

There is an ulcerative type of lesion with raised fleshy borders and thickening of the normal adjacent skin, a small amount of pus and a moderate amount of granulation tissue present.

The patient was given treatment consisting of rest in bed and a sprue type of diet with high vitamin content reenforced by halibut liver oil, orange juice, yeast and liver extract. He also received soaks with a 20 per cent solution of sodium

thiosulfate, application of sulfur ointment and gentian violet, roentgen irradiation, intravenous injections of antimony and potassium tartrate and electrodesiccation, the operative field being anesthetized with a 10 per cent solution of cocaine in glycerin.

Moderate but definite improvement resulted from this treatment.

The patient is presented for suggestions regarding treatment.

DISCUSSION

Dr. Fred Wise, New York: I wish to inquire whether lesions similar to those the patient now exhibits have been described as occurring in the cases of infections with Coccidioides immitis reported from California.

Dr. Fred Weidman, Philadelphia: Was the organism cultured from pus or demonstrated in histologic sections? It is extremely important to corroborate cases of this sort originating in this part of the United States. At present there are no clinical signs to indicate the diagnosis of coccidioidal granuloma. The lesions are masked by gentian violet; they are cleancut, punched-out ulcers without any evidence of inflammatory infiltration.

All of the patients with coccidioidal granuloma whom I saw on the Pacific coast presented lesions precisely like scrofuloderma. I am sure that the diagnosis could not have been made in those cases without the help of laboratory tests. I am quite aware that there are also fungating types—more or less like those of Gilchrist's disease. However, neither of these pictures is exhibited at present by Dr. Baird's patients.

Dr. Perry C. Baird Jr., Boston: In regard to Dr. Weidman's points, all of which are well taken, I wish to say that the original slides on the basis of which the diagnosis was made in the first case are in the possession of Dr. Norman Conant, a medical mycologist, who was assisting me in this work but who has recently transferred his activities to Duke University. In the second case the diagnosis was made on the basis of a temporary preparation. Photomicrographs of both of these slides were presented with the patients. Attempts to get fresh specimens for demonstration today were unsuccessful. In the first case the slide was examined not only by Prof. William H. Weston Jr., of Harvard University, but also by a mycologist from California, who regarded the organism seen as typical of the coccidioides.

In regard to Dr. Weidman's criticism of the diagnosis on the basis of the clinical appearance, I can say only that the appearance of the lesions in these two cases has been tremendously modified by successful treatment. Within the week, all the lesions were thoroughly trimmed down by means of electrodesiccation, a 10 per cent solution of cocaine being used as local anesthetic. Applications of gentian violet have further obscured the morphologic picture. In view of these considerations, it is hardly fair to draw any conclusions from the present clinical findings. Furthermore, it is clearly stated in the literature that there is nothing distinctive about the morphologic features of cutaneous lesions of coccidioidal granuloma. The diagnosis must rest on demonstration of the specific infectious organism.

In anticipation of this meeting today I had a telephone conversation with Prof. William H. Weston Jr., who has observed these patients closely, and I asked him whether any one would be justified in doubting the diagnosis on the basis of failure to culture Coccidioides. His answer was emphatic. He stated that the organism in these cases was Coccidioides without any question and that I had his full endorsement in regard to my diagnosis. It is true, however, that identification of the precise strain of Coccidioides will have to await cultural studies. Miss Cousins, Dr. Weston's assistant, has been doing cultural studies of the sputum of the first patient. It is known that the lungs are the most common site of infection in coccidioidal granuloma. From this sputum, a fungus has been isolated and is growing.

Dr. Weidman's statement in reference to the ease of culturing Coccidioides is not in accord with the published facts pertaining to open cutaneous lesions.

In a bulletin published by the California Department of Public Health dealing exhaustively with the subject of coccidioidal granuloma, it was pointed out that material from open lesions may be unfavorable for cultural studies. The secondary infection, which is almost invariably present, may destroy the fungus completely. In these two cases of mine, not only were the lesions obviously secondarily infected (one showing a marked pyocyanic growth) but during all cultural studies powerful local antiseptics were being used, combining with the secondary infection to reduce the viability of the fungus. I did not have the courage to omit local treatment during cultural studies because of my knowledge concerning the high mortality in cases of coccidioidal granuloma.

The one distinctive morphologic feature of Coccidioides is its manner of reproduction by endosporulation in infected tissues. The characteristic double contoured capsule containing hundreds of endospores does not form during growth on an ordinary culture medium but develops only in the lesions or in guinea-pigs which have received injections of infective material.

The photomicrographs of the double-contoured capsules containing endospores, which were present in both of my cases, correspond identically with the photomicrographs published by Tomlinson and the state of California as well as with some shown to me personally by Dr. Chope who has done a considerable amount of work on coccidioidal granuloma in California. Dr. Chope does not question the identity of the disease in my two cases with that which he saw in California.

In answer to Dr. Wise's question in regard to biopsy, the extremely high mortality from coccidioidal granuloma (rate probably about 65 per cent) has made me hesitant about carrying out any procedures which might induce dissemination of the disease. I feared that excising any part of these lesions even by the cutting current would lay open deeper tissues to the possibility of infection. However, pathologic studies do not distinguish coccidioidal granuloma from either tuberculosis or blastomycosis unless the typical coccidioidal spores are demonstrated.

A Case for Diagnosis (Scleroderma? Lichen Planus Atrophicans?). Presented by Dr. J. H. Swartz, Boston, and Dr. John G. Downing, Boston.

S. L., a Jewish woman aged 44, when first seen stated that for one year she had attacks of dyspnea associated with wheezing, coryza, cough, occasional sneezing and slight postnasal discharge. She also stated that for a period of one year scattered areas of burning and itching had been present on the surface of the skin. The eruption when first seen was not characteristic of any disease. The patient received several treatments with ultraviolet radiation without benefit. Two weeks after she was first seen, one large area on the right arm near the axilla showed some thickening; other areas soon showed definite spreading, and the skin in the involved regions showed a peculiar yellowish tint. Itching became troublesome. Two weeks ago, when thickened areas appeared on the arms and crural regions, it was believed that despite the lack of characteristic distribution the condition might well be scleroderma, because of its course. A biopsy confirmed this impression.

Physical examination revealed linear moderately scaly discolored areas on both arms, extending from the axillae to the wrists, as well as several smaller areas on both thighs and on the upper portion of the chest. These areas showed some atrophy, dryness and patches of depigmentation. Some of the areas had the typical porky feeling to the touch.

The blood count showed 4,930,000 red cells, 7,800 white cells and from 70 to 80 per cent hemoglobin. The differential count showed 59 per cent polymorphonuclears and 3 per cent eosinophils. The sugar content of the blood was 84 mg. per hundred cubic centimeters; the nonprotein nitrogen content was 37 mg.; the cholesterol content, 195 mg.; the calcium content, 10.5 mg., and the phosphorus

content, 3.26 mg. The urinalysis gave negative results. The basal metabolic rate was —8 per cent. The serologic tests of the blood gave negative results. Roentgenograms of the sinuses showed the ethmoid sinuses to be slightly cloudy; the mucous membranes were slightly thickened at the dependent portion of the right antrum. Roentgen examination of the chest showed no evidence of disease.

The allergic diagnosis was asthma. Cutaneous tests were all negative. There was no endocrinopathy.

DISCUSSION

DR. JOHN FRANK FRASER, New York: I suggest the diagnosis of dermatitis lichenoides chronica atrophicans. The condition was first described by Csillag. Cases have since been reported by Wise and Shelmire, Ormsby and others. Dr. Wise presented a patient with a similar disorder at a recent meeting of the New York Dermatological Society.

DR. FRED WISE, New York: I agree with Dr. Fraser's diagnosis of dermatitis lichenoides chronica atrophicans (Csillag). Dr. Ormsby has been interested in this and similar dermatoses and has published several articles on the subject. A similar condition was reported several years ago by Shelmire and me (ARCH. DERMAT. & SYPH. **18**:179 [Aug.] 1928). In cases of this dermatosis, lichen planus is excluded during all stages of the eruption; hence the name lichen sclerosis is a misnomer.

URTICARIA PIGMENTOSA.

S. McC., a boy aged about 3 years, whose father had active pulmonary tuberculosis and whose paternal uncle also had tuberculosis, was born at full term, by normal delivery. The weight at birth was 8½ pounds (3.8 Kg.). The infant was breast fed for five months; then he was given whole unboiled milk. He received cereal and vegetables at 6 months. He has taken orange juice since the age of 2 months and cod liver oil since the age of 4 months; the latter was not taken well until recently. The patient's development was normal; there was no prophylaxis.

When he was 16 months of age small red papules were noted on the back. These became yellow, and the eruption gradually spread to other parts of the body. Six months ago a rash appeared which involved practically the whole body except the face. There was no itching. There have been no true remissions or exacerbations, although the eruption has showed a tendency to fade in some places and to reappear in others. The patient was admitted to the Infant's Hospital on Feb. 9, 1935, at the age of 20 months.

At that time he was extremely well developed and well nourished and did not appear acutely or chronically ill. There was a chronic generalized papular, morbiliform eruption, which, however, did not involve the face or the extensor surfaces of the arms. The older papules were yellow and slate colored; the newer lesions were red. Dermographism was present. Pruritus was moderate, and after friction was applied to the skin the papules changed to wheals surrounded by an erythematous base. The head was large, and there were prominent frontal bossae. The anterior fontanel was closed. The pupils were equal and reacted well to light. The ears were normal. There was a purulent nasal discharge.

The mouth and throat revealed a postnasal drip. No Koplik spots were visible. The chest showed slight beading, and there was a suggestion of Harrison's groove. The lungs seemed resonant and clear throughout. The heart sounds were of good quality, and the rhythm was regular. The abdomen showed diastasis recti abdominis. The liver and spleen were not felt.

The urine was normal. The blood count showed 80 per cent hemoglobin, 4,940,000 red cells and 9,000 white cells. The results of the differential count were as follows: polymorphonuclears, 24 per cent; lymphocytes, 68 per cent; eosinophils, 8 per cent. The cholesterol content of the blood was 175 mg. per hundred cubic centimeters. A biopsy made during the first week the patient was in the hospital

was reported to show urticaria pigmentosa. Roentgen examination of the chest gave essentially negative results. The child had an uneventful convalescence. In view of the freedom from lesions of exposed surfaces, irradiation was given, but no appreciable benefit occurred. The patient was discharged on March 4, 1935, and the mother was told to bring him to the outpatient department.

He was seen once in that department, on March 21, 1935. A note stated that the condition of the skin was the same, and the patient was transferred to the dermatologic clinic of the Massachusetts General Hospital.

Biopsy of material from a lesion on the abdomen was made on Feb. 15, 1935. Tri-bromethanol in amylene hydrate and ether were used. The abdomen was prepared with ether and iodine and sterile drapes were placed. An elliptic specimen of skin was removed. The specimen was excised down to the superficial fascia. A part of this specimen consisted of normal skin, and a part consisted of pathologic tissue. Subcutaneous tissue was brought together with double 00 plain catgut. The edges of the skin were approximated with a continuous subcuticular silkworm gut suture. A dry sterile dressing was applied. The patient was returned to the ward in good condition.

The specimen consisted of an elliptic piece of skin and subcutaneous fat measuring 7 cm. in length, 1.3 cm. in width at its maximum portion and 6 mm. in thickness. A portion 2.5 cm. in length at one end presented pale, essentially normal-appearing skin, which was smooth and pale grayish white. The consistency of it and of the underlying subcutaneous tissue was soft and uniform. The remaining 4.5 cm. presented on the epidermal surface twelve slightly raised pale yellowish areas varying from less than 1 to 3 mm. in diameter. There was a slight increase in firmness over these areas. The intervening skin was essentially normal in appearance, as was the underlying fatty subcutaneous tissue. The cut surface showed a pale yellowish appearance to a depth of less than 1 mm. in the epidermis underlying the raised yellowish areas. Sections of the normal and abnormal areas were preserved in 95 per cent alcohol, in solution of formaldehyde and in Zenker's solution.

Two sections, one of the supposedly normal skin and the other from the region of the lesion, in addition to two similar ones stained with phosphotungstic acid and hematoxylin, showed an essentially normal overlying stratified squamous epithelium. In the section from the lesion there were numerous infiltrating oval or polygonal cells; these occurred immediately beneath the epithelium and occasionally concentrated in perivascular regions, but they appeared mainly as fairly large, dense infiltrations immediately beneath the epithelium and not in relation to any anatomic structure. The individual cells were approximately the size of a mononuclear phagocyte; some were spindle-shaped; some were oval, but most of them were polygonal. The cytoplasm was finely granular and showed a bright staining reaction to eosin. The phosphotungstic acid and hematoxylin stain showed the cytoplasm to vary from pink to blue, the same granules standing out prominently. The nuclei on the whole were round and tended to be rather small; they were moderately dense and showed no characteristic distribution of the chromatin. It was rather finely granular and densely staining and tended to be distributed fairly well throughout the nucleus. Occasional multinucleated cells of this type were seen, and it was not infrequent to find cells of this nature with two or three nuclei. Cells with more than three nuclei were relatively scarce but were occasionally seen. No mitoses were encountered. The corium beneath the layer of infiltration was essentially normal as seen by the two stains and showed no inflammatory reaction, fibrosis or hemorrhage. The underlying subcutaneous fat was essentially normal. The section from the grossly normal skin showed a few of these collections of cells immediately beneath the epithelium, sometimes associated with the perivascular region but often in relation to no definite anatomic structure. In this section the epithelium was less distributed, so that the normal epithelial papillae were seen. Additional sections with eosin and methylene blue and by the Gram and the Giemsa technic showed the cells to contain bright red granules, typical of moist cells fixed in Zenker's fluid. The

methyl green-pyronine stain on material fixed in 95 per cent alcohol showed that these cells were not plasma cells. The nuclei were pale green, and the cytoplasm was pale pink with fine granules.

DISCUSSION

DR. HARVEY P. TOWLE, Boston: Why is not the disorder diagnosed as a xanthomatous process? Is it not more organized than is ordinarily the case in urticaria pigmentosa?

DR. J. FRANK FRASER, New York: I agree with Dr. Towle that the lesion resembles xanthoma. The microscopic picture shows the presence of a large excess of mast cells. Frozen sections should be stained for lipoids. The disorder is in all probability the xanthomatous type of urticaria pigmentosa.

DR. FRED WEIDMAN, Philadelphia: I agree with the diagnosis, but I admit that it is almost entirely on the basis of the histologic sections. It is to be regretted that the sections are not particularly clear, so that one could accurately estimate the type of cell constituting the infiltration. They suggest plasma cells rather than mast cells. In this connection, I believe that the knowledge of the pathologic process in urticaria pigmentosa will be advanced if the state of the blood-forming tissues, i. e., lymph nodes, bone marrow and circulating blood, is studied. Perhaps the disorder can be related to one of the types of cells of the reticulo-endothelial system. At the same time, of course, the cells in the cutaneous infiltration should receive particular attention in the effort to reconcile them with cells which might be concerned in the hematopoietic system.

Clinically the lesions are extremely yellow. This calls for microchemical studies directed at fats particularly. Dietary peculiarities should also be inquired into in consideration of the rôle which carotene can play in cutaneous pigmentation, and since it is soluble in fats such as might conceivably be present in the mast cells, it may produce fat phanerosis.

A CASE FOR DIAGNOSIS (ATROPHIA CUTIS IDIOPATHICA PROGRESSIVA? DERMATITIS MEDICAMENTOSA?). Presented by DR. FRANCIS T. THURMON, Boston.

B. D., an Italian woman aged 30, states that thirty-two months ago cutaneous lesions developed. The onset was insidious. Occasionally new lesions appeared. There is no pruritus or other discomfort. A possible etiologic factor is marmola, a proprietary drug of which for four years the patient took one tablet three times a day after meals in order to lose weight. Marmola contains desiccated thyroid, bladder-wrack, phytolacca, cascara sagrada and phenolphthalein. The present eruption antedated and persisted after a rash of secondary syphilis, for which the patient has been treated since Dec. 30, 1933. The patient is six months pregnant.

In the early stages the lesions were elevated, smooth and red, of irregular, round and elliptic shape; they varied from a few millimeters to 1.5 cm. in their greatest diameter. The distribution was bilateral and almost symmetrical. Later they became thin, crinkled and slightly depressed, exhibiting atrophic areas of a color resembling that of the surrounding skin, and were best observed under proper illumination. There were no sensory disturbances and no alteration in the skin between the lesion. Scleroderma was not a feature of the rash.

The blood count and urinalysis gave normal results. The Hinton test was positive. The Wassermann and the Kahn test were negative. Roentgen examination of the long bones gave negative results.

A specimen of skin was removed from the middle of the back. The specimen consisted of an elliptic piece of skin and subcutaneous tissue 18 by 8 mm. and 3 mm. in thickness. Sections through the specimen showed a dense corium 3 mm. in thickness interspersed by a few small roundish, yellowish structures 1 mm. in diameter which reached up to the epidermis. Four sections were stained with hematoxylin and eosin and Weigert's elastic tissue stain. The epidermis was composed of small cells and presented many small papillary processes, giving to the surface a rippled appearance. There was slight degenerative change in some epidermal cells. The corium was thin and was composed of dense collagen bundles

and broken elastic fibers. There was slight edema in the subepithelial zone of the corium. Some cutaneous appendages were compressed and atrophic. There was an infiltration consisting of lymphoid and large mononuclear leukocytic cells around the blood vessels and cutaneous appendages. The sebaceous glands showed little or no change. No specific inflammation or tumor was present. The diagnosis was questioned.

A lesion from the left axilla was also removed for biopsy. The specimen consisted of an elliptic piece of skin and subcutaneous tissue 15 by 10 mm. and 8 mm. in thickness. Sections showed a dense white corium from 4 to 5 mm. in thickness interspersed by occasional radiating yellow lines of fat.

Four sections were stained with hematoxylin and eosin and Weigert's elastic tissue stain. The histologic picture was similar to that of the aforementioned sections except that the epidermis appeared thin and atrophic. The diagnosis was questioned.

The patient has received no treatment other than that for syphilis.

She is presented for diagnosis and suggestions regarding treatment.

DISCUSSION

Dr. Paul E. Bechet, New York: The patient presents an interesting association of two types of atrophy—a diffuse and macular type on the neck and a hernia-like type around the axillae and pectoral region. I have seldom seen an association of the two types in the same patient. A diagnosis of macular atrophy is probably correct. The hernia-like lesions in the axillary and pectoral regions, in which the end of the finger can be pushed, strongly suggest the Schweninger-Buzzi type of atrophy. The occurrence of the two types of atrophy in the same patient also suggests the possibility that the Schweninger-Buzzi syndrome is only a variation of idiopathic cutaneous atrophy.

Dr. Lee McCarthy, Washington, D. C.: I wish to call the attention of the society to the fact that I have noticed that these lesions have a tendency to form keloids where previously areas of atrophy existed. This was noticeable in the patient presented today. I observed a Negro who had a generalized macular atrophy, and much to my astonishment I noticed the gradual production of small keloids in each atrophic area. I wish to call attention to another interesting fact, namely, that this patient and the Negro of whom I spoke had a macular eruption due to secondary syphilis before atrophy developed.

Dr. S. S. Greenbaum, Philadelphia: The history states that this patient had a papular syphilid recently. If that is true, I should make a diagnosis of post-syphilitic macular atrophy. It appears that in some of the atrophic lesions keloidal changes have occurred, producing a picture similar to that in the two spontaneous keloids seen over the left shoulder.

Dr. Francis A. Ellis, Baltimore: The remarks I am going to make are apropos of those already made by Dr. Greenbaum. The distribution of the lesions with their long axis in the lines of cleavage certainly suggests that the eruption may be due to secondary syphilis. Most of the benign transitory growths of the Schweninger-Buzzi type which I have seen have followed secondary syphilis.

Dr. Francis P. Thurmon, Boston: If one can believe the history as given by the patient, the eruption which she has at present began several months before secondary syphilis appeared. She has received treatment for at least two years. These lesions continue to recur and to progress through their atrophic stage. Serologically there has been an improvement in that the Wassermann and Kahn reactions have become negative, the Hinton reaction remaining positive. These two points plus the fact that this eruption continues to appear from time to time although treatment for syphilis has been given, the absence of a recurrent secondary syphilis—all these points indicate that an atrophic dermatitis from syphilids is fairly well ruled out. Could this dermatitis possibly be due to an idiosyncrasy to the proprietary drug marmola, which the patient took for four years preceding the appearance of the eruption?

NEW YORK ACADEMY OF MEDICINE, SECTION OF DERMATOLOGY AND SYPHILIS

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Dec. 3, 1935

ROSACEA-LIKE TUBERCULID OF LEWANDOWSKY. Presented by DR. HENRY D. NILES.

R. M., a woman aged 43, is presented from the Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital.

This patient was presented by Dr. J. Frank Fraser before the New York Dermatological Society on Nov. 26, 1935.

DISCUSSION

DR. SIGMUND POLLITZER: This case interested me greatly because lately a considerable number of cases of the disorder shown by the patient have been reported in this country, and I am never certain about the diagnosis. I am not convinced that it is correct in this case. The disorder is, of course, what used to be called papular rosacea. The distinction between that condition and the rosacea-like tuberculid of Lewandowsky is not easily made. Of course, the histologic picture would have an important bearing if it were absolutely characteristic. The presenter states that in this case epithelioid cells and giant cells were observed, but those occur also in acne, and their presence is not a definitive and final criterion. Therefore, my opinion about this disorder is that while it may be, it is not necessarily, tuberculid. It may well be papular acne. I shall be glad to hear the presenter give more details of his observations.

DR. HENRY D. NILES: I believe that this patient presents the diagnostic criteria of Lewandowsky's tuberculid. I suspected that disorder clinically the first time I saw her, and I examined the papules under pressure with the diascope. The color was suggestive of that of apple jelly nodules. The histologic picture was considered to be that of Lewandowsky's tuberculid by Dr. Fraser and by Dr. Satenstein. The patient showed a distinct hypersensitivity to tuberculin, although it was not as marked as that exhibited by other patients with this condition whom I have seen. Most of the patients react strongly to a 1:1,000,000 solution of tuberculin, whereas this patient had a plus-minus reaction. She had a definite (2 plus) reaction to a 1:10,000 solution; this is stronger than normal. The lesions differ clinically from ordinary rosacea because they are rather flat, somewhat shiny and brownish rather than red. The papules are small and are not located predominantly on or near the nose as in cases of ordinary rosacea. Most of this patient's lesions are on the chin and cheeks, although there are some on the nose. The histologic picture agrees well with that in the cases recently reported by Dr. MacKee and by Dr. Sulzberger (ARCH. DERMAT. & SYPH. **31**:159 [Feb.] 1935).

A CASE FOR DIAGNOSIS (ERYTHEMA MULTIFORME? PEMPHIGUS?). Presented by DR. DAVID BLOOM.

M. B., a woman aged 40, born in the United States of Russian Jewish parentage, is presented from the service of Dr. Howard Fox at the Bellevue Hospital, because of lesions on the mucous membranes of the mouth of one year's duration.

On the mucous membranes of both cheeks there is an irregular ulcer, ½ by 2 inches (1.3 by 5 cm.) in diameter, extending from the posterior edge of the palate toward the middle of the cheek. The base is clean, free from pus or

membrane. There are no bullae. During the past year lesions have appeared and disappeared, but the aforementioned ulcerations have never disappeared. In the last few weeks the patient has complained of pain. During the past year she has lost 20 pounds (9.1 Kg.).

The patient states that she has taken 5 grains (0.324 Gm.) of aminopyrine twice a month for the last few years. The last time she took the drug was six weeks ago.

Examination of the blood showed 4,090,000 erythrocytes, 81 per cent hemoglobin and 11,650 leukocytes. The results of the differential count were as follows: 73 per cent polymorphonuclear leukocytes, 24 per cent lymphocytes and 3 per cent eosinophils. The sedimentation rate was 10 mm. after one hour (Cutler method). The Pels-Macht test gave a normal result, the index being 72 per cent. Examination for Vincent's organism gave negative results.

DISCUSSION

DR. ISADORE ROSEN: This woman presents rather deep symmetrical ulcerations on the inner surfaces of both cheeks. It is difficult to make an absolute diagnosis unless one can see and study the evolution of these lesions. The condition suggests a traumatic origin, such as biting. There is, however, a certain amount of secondary infection superimposed on these ulcerations. I thought of the possibility of tuberculosis, but I have never seen tuberculous ulcerations as symmetrical as the lesions exhibited by this patient.

DR. PAUL E. BECHET: The ulceration is too deep and extensive to suggest the diagnosis of either pemphigus or erythema multiforme. The ulcers are exactly in the same location on both sides of the cheeks, and they are sharply marginated. It is therefore possible that they are due to electricity from metals of different potentials in the patient's dentures. The occurrence of lesions of this type has been reported by Lane, of Oklahoma City, and some examples were exhibited by him before the Section on Dermatology and Syphilology of the American Medical Association a few years ago. The patient states that the lesions did not start until she had had some teeth extracted and new plates adjusted. I certainly should not consider a diagnosis of erythema multiforme.

DR. EUGENE F. TRAUB: It seems to me that the first thing to do in this case is to decide whether or not the patient has bullous lesions in the mouth. From the history I obtained from the patient I thought that there never were any blebs. The presenter, who has observed her for a long time, may have seen blisters. If a diagnosis of bullous disease could be definitely established, that would eliminate many conditions which should otherwise be considered because of the peculiar ulcerations. The ulcerations, of course, do not suggest either erythema multiforme or pemphigus. There is a history of tuberculosis in the family, and if it has not already been done, studies for evidence of that disease should be made. Thus, in general, I agree with the remarks of Dr. Rosen.

DR. OSCAR L. LEVIN: I do not agree with the diagnosis of pemphigus or of erythema multiforme. Clinically there are no evidences of these conditions. I favor a diagnosis of traumatism, as suggested by Dr. Rosen. Another possibility that should be considered is that of necrotic ulcers resulting from ingestion of drugs. Aminopyrine may produce necrotic ulcers of this type, and they may occur in cases of agranulocytosis, which may also be the result of ingestion of a drug like aminopyrine. The history indicates that the patient has taken this drug frequently for many years.

DR. LEO SPIEGEL: I agree with the remarks of Dr. Rosen. Possibly the diagnosis of periadenitis mucosa necroticans recurrens may be considered.

DR. ADOLPH ROSTENBERG: I cannot accept the diagnosis of pemphigus. That disease never leaves such deep ulcerations. I have seen a number of patients with lesions of pemphigus in the mouth; those lesions clear up without ulcerating. The same thing is true of lesions of erythema multiforme. The diagnosis of arte-

fact, I think, comes nearest to being correct. If there is any question of ingestion of a drug, I should not consider that of aminopyrine but rather that of phenobarbital. I have seen ulcers on the tongue resulting from ingestion of phenobarbital.

Dr. E. W. Abramowitz: I wish to ask Dr. Bloom whether the patient has epileptic seizures.

Dr. David Bloom: Vincent's infection was excluded by the absence of the organism, and agranulocytosis, by repeated normal results of examination of the blood. On close observation continued for several months, there were seen on the mucous membranes of the lips, cheeks, gums and soft palate lesions which constantly appeared and disappeared. They started as infiltrated red plaques and then ulcerated superficially, the ulceration being preceded by the appearance of white necrotic areas in the center. Only the two symmetrically located ulcerations on the posterior part of the mucous membranes of the cheeks did not change in appearance and have persisted for one year, according to the patient. Repeated questioning as to ingestion of drugs was fruitless until finally the patient admitted having taken aminopyrine regularly twice a month during the last few years for severe headache which followed mild epileptic seizures. However, though ingestion of aminopyrine was discontinued in the last six weeks, the lesions have improved only slightly, and new lesions have continued to appear. My opinion is that the disorder is erythema multiforme of unknown etiology. I admit, however, the possibility of pemphigus, in spite of the negative Pels-Macht test, because of the history of loss of weight and increasing weakness. An electrolytic effect of metals can be excluded because the dental plate which the patient uses while eating contains only a small amount of gold.

Dr. E. W. Abramowitz: I think the lesions are produced by trauma during the epileptic seizures.

Note.—Since the patient was presented laryngologic examination revealed similar red plaques with or without white necrotic areas on the epiglottis and vocal cords. This finding certainly excluded the possibility of any artificial factor.

Chronic Serpiginous Ulcerative Pyoderma. Presented by Dr. David Bloom.

A. G., an Italian girl, aged 17, is presented from the service of Dr. Howard Fox at the Bellevue Hospital because of an eruption on the left leg and thigh of seven and one-half years' duration.

This patient was presented by Dr. Howard Fox and Dr. Edward R. Maloney at the Atlantic Dermatologic Conference on Nov. 17, 1934.

The patient has improved markedly under treatment with autogenous vaccine and generalized and local ultraviolet radiation. At present there are only a few crusted, ulcerated lesions, particularly on the lower part of the leg and on the foot. Smooth, thin scars cover the rest of the leg and the thigh.

DISCUSSION

Dr. Herman Goodman: I think that this long-standing chronic disease is probably tuberculous because of the appearance of the lesions at the border and the limitation of the involvement to one extremity. I did not consider the pyogenic origin until after I had read the history, and then I did not agree with the diagnosis.

Dr. Hermann Feit: I consider this an unusual disorder. It was first described by Hoffmann. It used to be diagnosed as blastomycosis, syphilis, tuberculosis and other conditions. As a result of the outstanding work which Dr. Bloom has done on this subject for years, all the other possibilities can be excluded. There are cases in which for some unknown reason the lesions form a pattern which reminds one of a specific infection. I agree with the diagnosis because, after all, all other possibilities have been ruled out, and patients with this disorder have been seen. If I am not mistaken, Dr. Bloom presented one last year. I should like to know whether the findings were similar in the two cases.

DR. DAVID BLOOM: Yes, they were.

DR. EUGENE F. TRAUB: This impresses me as being an unusual and important pathologic entity. I have no doubt that the disorder is more common than is generally believed, because in most of the cases, I believe, the condition is regarded as tuberculosis. There is in the New York Post-Graduate Medical School and Hospital at the present time a patient who has somewhat similar ulcerative lesions; the condition, which involves both legs, was originally diagnosed as Bazin's disease. It has now been discovered that Endamoeba histolytica is present in this patient's stools. While examination of material from the lesions has consistently given negative bacteriologic results, it is nevertheless believed that there is some definite connection between the eruption and the colitis of which the patient complains. The ulceration seems definitely not to be of tuberculous origin. In the past my co-workers and I have seen a number of patients with lesions on the dorsa of the hands which have been regarded as either blastomycosis or tuberculosis and which presented a picture exactly similar to that in Dr. Bloom's case. I have had two or three patients with such a disorder myself, and I have tried without success to prove that the condition was either blastomycosis or tuberculosis, but I was forced to conclude that the eruption was caused by some type of organism other than those responsible for the aforementioned diseases. Dr. Bloom, I believe, is eager to receive some therapeutic suggestions. It was suggested that the crusts be removed from some of the larger lesions still present and that the bases be electrodesiccated in order to cure the ulceration. This appears to me to be rather a hazardous method, because there seems to be no certainty that such a procedure might not merely cause an extension of the process. I should favor a less drastic method if this were my patient.

DR. MARION B. SULZBERGER: I wish to ask Dr. Bloom on what basis the diagnosis of pyoderma was made. I cannot venture any diagnosis. The eruption looks like a destructive and scarring chronic granulomatous process. I think it is a mistake to make the diagnosis of pyoderma by exclusion only, that is, by simply excluding syphilis and tuberculosis and a few common causes of such scarring and granulomatous processes without having proved that any of the criteria necessary to establish the rôle of a micro-organism in the production of a disease are present. In other words, pyogenic cocci are found so frequently in all types of ulcerative lesions and even in normal skin that one must demand more than the presence of these organisms to establish the etiologic diagnosis in such an unusual case. The members have heard what Dr. Traub said concerning Endamoeba histolytica. One can add a host of unusual etiologic agents which are capable of producing such unusual lesions, and I think that it is loose practice to make a diagnosis of pyoderma unless one can prove that the lesions are actually caused by pyogenic organisms. Furthermore, I believe that tuberculosis cannot be excluded in this case unless at least twelve guinea-pigs inoculated with the suspected active tissue and surviving for at least six months have at autopsy been found to have no histologic or bacteriologic evidence of tuberculosis in the glands and other organs. This is the accepted procedure for the demonstration of the presence of tubercle bacilli in cases of questionable cutaneous lesions.

DR. SIGMUND POLLITZER: I wish to call the attention of the presenter to the report of cases of obscure serpiginous chronic ulcerations which was published about three years ago from the Mayo Clinic. The thing is a little vague in my mind, but this type of disorder suggests the condition described in that publication. No doubt, Dr. Bloom is acquainted with it and will show me that the condition exhibited by his patient is not at all the same as that to which I referred.

DR. DAVID BLOOM: I am well acquainted with the paper mentioned by Dr. Pollitzer. In fact, Dr. Abramowitz and I have had two patients with that disorder under observation for a considerable time. Both of them had suffered from colitis for many years; this was the debilitating factor producing the cutaneous eruption. One of the patients was an 18 year old girl in whom after an incision

for a tonsillar abscess a gangrenous ulceration of the neck, face and chest developed. Bacteriologic examination yielded Staphylococcus and Streptococcus. No other debilitating factor could be found except colitis, but a few months before the patient died tubercle bacilli were found in the sputum. Our opinion was that the cutaneous lesions were produced by pyogenic bacteria in a patient who was debilitated by colitis and tuberculosis.

In the case of the patient presented today tuberculosis, syphilis, amebiasis and blastomycosis were excluded. The bacteriologic examination was made by a competent worker at the Bellevue Hospital, who obtained the material from the depth of the ulcers. There was no evidence of tuberculosis except a positive reaction to a 1:1,000,000 solution of tuberculin. The name pyoderma was used because repeated examination revealed the presence of pyogenic bacteria. The production of more severe ulceration in a rabbit by a mixture of these organisms than by any one of them separately reminds me of the work of Meleney about symbiosis of bacteria in obstinate ulcerations following operations. A number of cases of such disorders were reported in the literature, and the observations were similar. It proves the ability of pyogenic bacteria to produce a variety of clinical lesions, in the same way as the organisms of tuberculosis and syphilis may do so. The unilateral distribution of the eruption may be explained as in cases of tuberculosis and syphilis, namely, by some factor of immunity protecting one part of the skin and not another.

As to treatment, I am convinced that if daily bathing of the leg with a solution of potassium permanganate and local and general ultraviolet irradiation had been used regularly and a diet rich in quantity and quality had been followed, the eruption would have disappeared long ago. However, in spite of the neglectful treatment the patient has received, she has improved considerably in the course of the past year.

Dr. Eugene Traugott Bernstein: Patients with recalcitrant ulcerations of the leg, serpiginous in outline, were frequently presented at the South German Dermatological Conference in Frankfort, Germany, where precisely the same discussion as that which has been held today led to no conclusion. To such ulcers of unknown origin, the Latin term ulcus incertum was applied. Hoffmann emphasized the fact that bacteriologic and other thorough investigations failed to reveal any certain cause and that this disorder is extremely resistant to treatment.

Naevus Pigmentosus. Presented by Dr. Louis Tulipan.

M. F., a girl aged 3 months, is presented from the service of Dr. Howard Fox at the New York University College of Medicine. At birth she exhibited many brown spots over the scalp, face and entire body. Some of these spots, according to the mother, have faded entirely and others have paled considerably. There are discrete pale and dark brownish macules from the size of a pinhead to that of a pea on the face, scalp and entire body. From the middle of the back, arranged in a semilunar formation, extending to either side and down to the buttocks, there is a dark brownish and black infiltrated patch with a soft, boggy mass on the right side about the size of a walnut and a small soft nodule below.

DISCUSSION

Dr. Eugene F. Traub: The most important point about this case is that it is one of the few cases in which there is evidently a bona fide disappearance of some of the pigmented nevi. While this has been reported to occur, one seldom has the opportunity of actually observing such cases. The mother definitely states that the child had many more lesions scattered over the face which have completely disappeared, and, furthermore, many of the smaller lesions that are still present are apparently in the process of disappearing.

Dr. Sigmund Pollitzer: Perhaps a negative suggestion may be of value. I want to emphasize the fact that anything that is done in this case will probably make the disorder much worse. My suggestion is to refrain from using treat-

ments. As to the fading of some of these lesions, I pointed out to the mother some very pale lesions, and she said that is the way they disappear. Many of the smaller lesions have disappeared already, leaving faint yellow stains. I think there is a fair prospect for disappearance of at least the smaller lesions. As for the large lesion on the back, I should leave that alone.

DR. HERMAN GOODMAN: Can one assume that the lesions which have disappeared were nevi? Does Dr. Pollitzer assume without examination that these small lesions are of the same type as the large lesion?

DR. LOUIS TULIPAN: I can also verify the mother's statement that many of the satellite lesions have been paling and that the large lesion on the back has also paled on one side. As to the treatment, I have suggested to the mother that none be used. I agree with Dr. Pollitzer on that point. Another point is that I believe that all these satellites are nevi. I saw a picture of a similar disorder in Andrews' textbook; it showed a pigmented nevus with satellites distributed over the entire body.

A CASE FOR DIAGNOSIS (TUBERCULOUS ULCER?). Presented by DR. F. PHILIP LOWENFISH.

F. W., a Negress aged 16, born in the British West Indies, is presented from the Vanderbilt Clinic because of lesions in the mouth of six months' duration and lesions in front of the left ear and on the lower part of the back in the midline of four months' duration. The patient was first seen at the clinic on Nov. 2, 1935.

There is a raised, infiltrated, granulomatous reddish area with numerous minute ulcerations involving the soft palate, uvula and tonsillar areas. In addition, there are raised soft nodules, each the size of a millet seed. There is a grayish-white adherent exudate, especially in the midline and over the uvula. Some oozing of blood appears after digital examination. The patient does not complain of any pain. In front of the left ear there is a reddish ulcer the size of a quarter, the floor of which looks clean and the border of which is raised. There is no adenopathy. The lesion on the lower portion of the back is similar in appearance to the one in the left preauricular area. There is a chain of scars on the medial aspect of the left leg and thigh and on the left sole, and one scar is present on the back near the left axilla.

Roentgen examination of the chest showed the pulmonary fields to be clear. Two examinations of the sputum gave negative results in July 1934. While the patient was under observation in the clinic, her weight and temperature showed nothing abnormal. At no time were there any signs of pulmonary involvement. On Dec. 3, 1935, otolaryngologic examination showed a sloughing area which extended into the nasopharynx on the left side.

The first Wassermann reaction was 2 plus with cholesterolized antigen and negative with alcoholic antigen. The Kahn test and a dark-field examination gave negative results. Cultures from the throat were negative for fungi. A provocative injection of 200 mg. of arsphenamine was given. In twenty-four hours the Wassermann and Kahn reactions were negative. In forty-eight hours, the Kahn reaction was negative, while the Wassermann reaction was 1 plus with cholesterolized antigen and negative with alcoholic antigen. One week later the findings were the same except for a 2 plus reaction with cholesterolized antigen.

Inoculations of guinea-pigs and chickens have been made, and the results will be reported at a future meeting. Intradermal tests with tuberculin made on Nov. 29, 1935, gave the following results: On the lateral side of the right forearm, a 1:1,000 dilution produced a raised, infiltrated, erythematous and vesicular lesion with pseudopods, 5 cm. in diameter; a similar reaction, 3 cm. in diameter, was obtained on the medial side of the right forearm with a 1:10,000 dilution, and a similar reaction, 2 cm. in diameter, appeared on the left forearm after a test with a 1:100,000 dilution. The temperature was 102 F. Seventy-two hours later there was little change in these lesions; the temperature was 100.8 F. The lesion on the back showed a tendency to healing, and the lesion on the face looked cleaner.

A biopsy specimen showed a tuberculous granulation tissue. It was considered as probably a tuberculous ulcerative process; the possibility of tertiary ulcerative syphilis and that of American leishmaniasis were considered. No acid-fast organisms were seen; a Giemsa stain and several smears from the palate showed no Leishmania.

A note from the Bellevue Hospital stated that this patient was admitted to that institution at the age of 9 years, in March 1928. A biopsy of material from an ulcer and from a lymph node from the foot indicated tuberculosis. The diagnosis was tuberculosis of the skin and tuberculosis of the lymph nodes of the leg. The Wassermann test and blood counts gave negative results.

DISCUSSION

DR. SIGMUND POLLITZER: I agree with the diagnosis.

DR. LOUIS TULIPAN: I cannot agree that the ulcers in the mouth and those on the tonsils are tuberculous unless there is a pulmonary tuberculosis. One rarely sees primary ulcers in the mouth or on the mucous membranes unless they are secondary to pulmonary lesions.

DR. MARION B. SULZBERGER: I agree with the presenter's diagnosis of the cutaneous lesions, and I also agree with Dr. Tulipan. I think that this patient presents a combination of various tuberculous manifestations of the skin and mucous membranes. I think she has scrofuloderma or tuberculosis colliquativa of the lower extremities. The nodules follow the chains of lymphatics along the thighs. I find that in addition she has characteristic lupus vulgaris of the mucous membranes of the mouth. There is a tendency to healing in the center, and a serpiginous extension is evident along the edges of the lesions on the palate. The edge consists of typical lupous nodules of the mucous membrane.

DR. HERMANN FEIT: The point which Dr. Sulzberger made is important. One can see that the lesions on the leg follow the lymph vessels. It is interesting that, according to the history, this patient was treated at the Bellevue Hospital a few years ago for tuberculous ulcers on the foot. There is a possibility that she originally had a primary lesion of tuberculous origin on the foot and that the infection gradually extended from there upward along the lymphatics and then spread to the skin, resulting in a real tuberculosis cutis, which does not necessarily have anything to do with tuberculosis of the lungs. The erythema on the arm resulting from the tuberculin test, I think, also points in that direction.

DR. MARION B. SULZBERGER: It is important, particularly in conjunction with what Dr. Feit said, to be careful as to what is implied by the statement "examination of the lungs gave negative results." When one suspects that a lesion on the skin may be a primary extrapulmonary focus, that is, a tuberculous primary complex of the skin, it is important to find out whether there is any proof of there ever having been any evidence of pulmonary infection or of tuberculous infection elsewhere. The roentgenologists usually say that the results of examination of the lungs are negative even when they find increased markings at the hili, calcified glands and so forth; they mean simply that there is no active process. From the dermatologic point of view such a finding is certainly not "negative." If there is evidence of an old healed focus in the lungs, the cutaneous lesion cannot be considered a primary complex. One must consider this point when evaluating and studying the findings in examinations of the lungs and must look at the roentgenogram of the chest before accepting the roentgenologist's report of negative results.

LUPUS ERYTHEMATOSUS DISSEMINATUS WITH MARKED PIGMENTATION. Presented by DR. DAVID BLOOM.

A. S., a woman aged 40, married, is presented from the Bellevue Hospital because of an eruption on the face and chest which began in March 1933.

This patient was presented by Dr. Edward R. Maloney before the New York Dermatological Society on Nov. 28, 1933.

Since then she had received two injections of gold and sodium thiosulfate, at one week's interval. The eruption became much worse after these injections. Treatment with sodium thiosulfate and calcium chloride during the ensuing two months was without any benefit. Since then bismuth has been administered intramuscularly, and distinct improvement of the eruption and of the general condition has occurred. Marked pigmentation in the lesions of the face and some slightly scaly and infiltrated erythematous lesions persist on the face and chest. Laryngoscopic examination revealed erythematous lesions similar to those on the face. The nose and throat were normal.

DISCUSSION

DR. E. W. ABRAMOWITZ: The peculiar bluish hue in this pigmentation suggests the possibility of chrysiasis. This is a late sequel and may result from a few injections of a gold preparation. Eruptions of that nature have a peculiar location around the eyelids, which this woman's lesions exhibit. I doubt whether this is just an ordinary disseminated lupus.

DR. R. J. KELLY: How long has the pigmentation been present on the hand? There is definite pigmentation on the hands, running up to the wrists.

DR. DAVID BLOOM: I did not notice any pigmentation on the hands. Although the patient has improved as a result of injections of a bismuth preparation, there are a number of lesions on the face and chest which are persistent. Although I believe that the injections of gold and sodium thiosulfate caused an exacerbation of the condition, I do not think that as small an amount, 15 mg. of gold and sodium thiosulfate, received within two weeks could cause the marked pigmentation. I have seen a number of cases of disseminated lupus erythematosus associated with this type of pigmentation, and I am inclined to believe that this feature might be characteristic for the lesions of lupus erythematosus disseminatus undergoing involution. It is also interesting that lesions of the same type as those on the face were present in the larynx and caused hoarseness.

A CASE FOR DIAGNOSIS (PSORIASIS?). Presented by DR. GEORGE M. LEWIS.

A. S., a woman aged 45, is presented from the Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital because of an eruption involving the fingers and toes of seven months' duration. The nails of the index, middle and ring fingers of the right hand and that of the middle finger of the left hand show various degrees of dystrophy. There are edematous, erythematous swellings around the nails. There is definite enlargement of the terminal phalanges. Some tenderness is present. The toes and toe-nails are similarly involved. There are some maceration and scaling between the toes. Erythematous scaly lesions have recently appeared on the forehead.

Examinations for tinea have given negative results on three occasions. The Wassermann test and urinalysis gave negative results. Roentgen examination of the chest shows an enlarged aortic type of heart with moderate fusiform aortic dilatation. Roentgen studies of the fingers and toes showed some osteo-arthritic changes of the terminal phalanges which were probably partly due to occupational trauma. The osteo-arthritic sharpening at the metatarsal articulation is due to pressure of the shoe. Further hypertrophic changes, especially in the terminal phalanges of the great toes, associated with rarefying osteitis and absorption of some of the terminal tufts as well as swelling of the soft parts, are considered neurotrophic, and the evidence of arteriosclerotic changes is also significant. Because of the multiple arthritic involvement and occasional punched-out areas at the articular borders, a background of gouty diathesis is also deserving of clinical consideration. The uric acid content of the blood was 2.9 mg. per hundred cubic centimeters. Cutaneous tests with trichophytin gave negative results; there was a mild reaction to oidiomycin. The temperature of the skin and the oscillometric readings were normal. No other vascular changes were noted.

DISCUSSION

DR. GEORGE C. ANDREWS: This patient appears to me to have psoriasis. The eruption on the scalp is characteristic and confirms the impression given by the appearance of the finger-nails.

DR. OSCAR L. LEVIN: When I examined the patient, I considered the diagnosis of psoriasis, and I immediately removed her hat in order to see whether she had lesions of this condition on the scalp. I observed that the scalp and the forehead presented numerous inflammatory follicular lesions with necrotic centers and crusts. Older lesions showed a tendency to the formation of small pitted scars. The lesions suggested those of papulonecrotic tuberculid. It is my impression that the patient is suffering from a staphylococcic infection resulting in lesions of the scalp and forehead and a destructive condition of the finger-nails.

DR. HENRY D. NILES: I cannot see how psoriasis or an ordinary pyogenic infection can cause the marked thickening of the bone at the tips of the fingers. Also, the skin at those sites is red, thickened and edematous. The appearance suggests to me a pulmonary arthropathy, or possibly some neurologic change. I understand that a neurologic examination is about the only thing that has not been done.

DR. EUGENE TRAUGOTT BERNSTEIN: I agree with the possibility of osteopulmonary arthropathy, and I suggest that the lungs be examined.

DR. EUGENE F. TRAUB: As I recall the condition, which has a number of pseudonyms, designated by Osler as hypertrophic pulmonary arthropathy, the terminal phalanges are swollen and deformed, and the picture usually presented is characteristic, but so far as I know it is never associated with any pyogenic infection, as is the case in this patient.

DR. GEORGE M. LEWIS: Psoriasis arthropathica appears to be the most logical diagnosis; that is based mainly on the exclusion of other possibilities. The process is acute, and the deformities produced are more severe than those usually associated with psoriasis. Arthritis of the small joints in cases of psoriasis is fairly common, but it usually affects only one or two joints and is frequently overlooked. A thorough neurologic examination has not been made, but an ordinary examination failed to reveal any gross changes. Because a favorable response was obtained in a similar case, this patient will probably receive salicylates. I wish to mention that so far as roentgen studies are concerned there is apparently no definite type of arthritic involvement when arthritis is associated with psoriasis.

ERYTHEMA INDURATUM (BAZIN'S DISEASE) AFFECTING THE UPPER AND LOWER EXTREMITIES. Presented by DR. G. D. ASTRACHAN.

A. B., a woman aged 62, is presented from the service of Dr. Frederick Dearborn at the dispensary of the Metropolitan Hospital because of an eruption of three months' duration. The patient came to the dermatologic clinic on Nov. 1, 1935, complaining of an eruption on the upper and lower extremities which had been present for two months. Before that time she had been using salicylates for arthritic pains. On the lateral aspects of the arms and forearms, on the lower halves of the thighs and over the entire legs is an eruption composed of well defined, reddish-brown to bluish-red, indurated lesions from the size of a pea to that of a 50 cent piece. Some of these, especially the ones on the upper extremities, are deep-seated indolent nodules, almost skin colored. Others are erythematous, infiltrated and tender, and present a broken-down center with a deep ulceration covered with a light brownish crust. There are many pitted scars from the size of a pea to that of a bean scattered over both legs. There is moderate involvement of the posterior cervical glands. There is no history of tuberculosis in the family. The patient feels well except for pains in both knees.

The Wassermann reaction has been negative on three occasions. The Kahn reaction was reported to be from 1 plus to 3 plus on three occasions. Urinalysis gave negative results. Tuberculin tests made at the Skin and Cancer Unit of the

New York Post-Graduate Medical School and Hospital gave the following results: A 1:1,000,000 solution produced a plus-minus reaction; a 1:100,000 solution, a 1 plus to 2 plus reaction, and a 1:10,000 solution, a 2 plus to 3 plus reaction.

An entire deep-seated indolent nodule was excised, and the results of histologic examination were reported by Dr. David L. Satenstein as follows:* "In some parts the vessels in the upper portion of the cutis are considerably dilated; in other parts they have thickened walls and a perivascular infiltrate composed of small round and connective tissue cells. At the junction of the cutis and the subcutis there is a group of typical tubercles which are made up of epithelioid cells with some giant cells and small round cells. Some tubercles contain a central zone of necrosis. In the fat there is a large area of disintegration with some young connective tissue around it. The epidermis shows little of noteworthy change. The diagnosis is Bazin's disease."

DISCUSSION

Dr. Isadore Rosen: The clinical appearance, of course, is suggestive of Bazin's disease. The patient presents numerous coin-sized inflammatory lesions, some of which have necrotized and formed scars. A certain amount of inflammatory reaction is present. I do not remember ever having seen Bazin's disease so disseminated or occurring in a patient of that age. I should be more inclined to make a diagnosis of periphlebitis or perivasculitis, in spite of the fact that the histologic picture shows some of the structures of Bazin's disease.

Dr. Paul E. Bechet: It is my belief that periphlebitis nodularis necroticans is an aberrant type of Bazin's disease and not a clinical entity. It has, however, a somewhat different symptomatology. Two of the patients whom I presented with that diagnosis exhibited on the lower portion of the legs subcutaneous nodules arranged in beadlike formation. The nodules were large, greatly indurated and red but lacked the violaceous hue of typical erythema induratum. In neither case did they break down to form ulcers, as is so common in cases of Bazin's disease; on the contrary, as involution took place the skin seemed to be drawn down, and the resulting scars depressed. Dr. Astrachan's patient does not present that picture, but her condition is apparently typical of erythema induratum. The lesions on the arm may prove to be an aberrant type of papulonecrotic tuberculid. The coincidence of the two conditions is not uncommon.

Dr. Marion B. Sulzberger: I think there is no such disease as periphlebitis nodularis necroticans of Philippson, for the following reason: Philippson described under that title disorders affecting the lower extremities, and at about the same time Dr. Pollitzer described a similar condition under a name referring to the sweat glands (hidradenitis suppurativa). Darier began to work on similar cases in France at about that time, and he found that in cases of disorders corresponding to those described by Dr. Pollitzer and Dr. Philippson he could demonstrate tuberculoid and tuberculous structures. He also demonstrated the presence of tuberculous foci and brought out other evidence that these were tuberculids, and he called these conditions papulonecrotic tuberculids. Philippson then examined his two original patients for evidence of tuberculosis and found that in them also the cutaneous lesions were of tuberculous origin. He therefore agreed that these conditions should all be called papulonecrotic tuberculids and dropped his own designation. I therefore cannot see how any one can maintain that there is any such thing as Philippson's periphlebitis nodularis necroticans when Philippson himself admitted that such a condition does not exist.

Regarding this patient's condition, I am inclined to think that it is a perhaps somewhat unusual and large type of papulonecrotic tuberculid, rather than Bazin's disease, for the following reasons: 1. The dissemination, affecting the upper extremities, is unusual for Bazin's disease and not unusual for papulonecrotic tuberculid. 2. Many of the lesions are too small and show definite small crusting, necrotic centers instead of colliquative centers such as one finds in Bazin's disease. 3. There are definite round and oval pitted scars, identical with the ones seen in papulonecrotic tuberculid and not identical with the ones seen in Bazin's disease.

4. These lesions are hotter to the touch than normal skin. It is frequent, in fact it is the rule, in Bazin's disease that the lesions are cooler to the touch than normal skin. All in all, the evidence rather favors the diagnosis of papulonecrotic tuberculid. I admit that it is not always easy to distinguish between these two disorders. Clinically one process seems simply to be a deeper form of the other. However, the diseases are certainly different as regards incidence, predilection for sex, localization, etc.

DR. HERMAN GOODMAN: As I recall it, Bazin's disease is a disease of young women. This patient, however, is 62. On the other hand, Ayres described a condition clinically similar in women who have passed the menopause; he made a distinction, stating that the disorder he described was not Bazin's disease but clinically resembled that condition.

DR. G. D. ASTRACHAN: When I first saw this patient I considered the diagnoses of tertiary syphilis, Bazin's disease, bromoderma and iododerma. Dr. Rosen and Dr. Satenstein suggested the possibility of periphlebitis nodularis necroticans. All these diagnoses, except that of Bazin's disease, have been ruled out by the results of the biopsy, which, according to Dr. Satenstein, showed a picture typical of Bazin's disease with beginning disintegration. I do not agree with Dr. Sulzberger, who maintains the possibility of papulonecrotic tuberculid. As I recall the pathologic process in papulonecrotic tuberculid is much more superficial than in this case, and real tubercles are seldom found. This patient is presented because of the rarity of cases in which lesions occur not only on the lower but on the upper extremities and also because of her age. Cases in which the picture is similar to this one are rare, but some are mentioned in the literature. Bazin, Crocker, Pringle and Colcott Fox have observed lesions not only on the legs but on other parts of the body as well, especially, however, on the arm (Stelwagon, H. W., and Gaskill, H. K.; Diseases of the Skin, ed. 9, Philadelphia, W. B. Saunders Company, 1921, p. 155). Crocker observed Bazin's disease in a woman of over 50 (Ormsby, O. S.: Diseases of the Skin, ed. 4, Philadelphia, Lea & Febiger, 1934, p. 777). There is another factor which, in my opinion, is important. This patient has a negative Wassermann reaction but a persistently positive Kahn reaction, the results of two tests being plus and 3 plus, respectively. The test was performed in two different laboratories. I believe that possibly a syphilitic infection in this patient may be a contributory cause for the appearance of these lesions. A case of Bazin's disease with a tuberculous and syphilitic etiology was reported by Watrin (*Bull. Soc. franç. de dermat. et syph.* **36**:39 [Jan.] 1929).

GIANT CELL TUMOR OF THE LEFT THUMB. Presented by DR. ISADORE ROSEN.

T. E., a Negro boy aged 13, is presented from the Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital. The family history and the past history are irrelevant except that the patient had pneumonia at the age of 14 months.

The left thumb was first noticed to be enlarged about six months ago. The mother states that the size of the thumb has remained about the same for the past six months.

Examination shows the distal phalanx of the left thumb to be enlarged to about the size of a small lemon. The mass is firm and tender. It is not painful unless moderate pressure is applied. The nail is enlarged proportionately. There is no lymphadenopathy.

The Wassermann reaction of the blood was negative on Nov. 26, 1935. On Dec. 2, 1935, the report on the roentgen examination was as follows: 1. Examination of the left thumb showed a marked neoplastic expansion of the terminal phalanx. The cancellous tissue was so disarranged that little of the structural detail remained except at the base, where there was a somewhat trabeculated cystic-like appearance, suggesting the lesion to have been primarily a cystic osteofibroma or a so-called giant cell tumor. The diagnosis was marked neoplastic expansion of the terminal phalanx of the left thumb and probable primary cystic osteofibroma with secondary sarcomatous degenerative changes. 2. Examination of the skull

showed considerable variation in the structure of the bones of the vault, with areas of porosity corresponding to the convolutional depressions. This was most noticeable in the parietal bone and suggested a moderate increase in intracranial pressure. The sella turcica was relatively small, being fully 25 per cent undersized. On the other hand, it was smooth in contour and presented no evidence of erosions; neither were there any abnormal calcifications. The accessory nasal sinuses and mastoids showed fair transillumination. The following abnormalities were present: disproportionately long skull; relatively small sella turcica; moderate accentuation of convolutional depressions.

DISCUSSION

DR. SIGMUND POLLITZER: I do not think that a diagnosis can be made without a biopsy. It seems to me that I could only guess as to the nature of such a tumor. I should probably guess that it is a sarcoma, but that would be only a guess. I do not think that the true nature of the tumor has any relation to the roentgen findings in the lad's skull. He is reported to have some irregularity of the sella turcica, and I do not see how there can be any connection between that and the lesion of the thumb, which, in my opinion, is probably a neoplasm.

DR. MARION B. SULZBERGER: I can venture no diagnosis other than that made by Dr. Pollitzer, namely that this patient has a tumor of the thumb. I wish to call attention to something which I heard this evening from my associate, Dr. Joseph Goodman, and from Dr. Rudolf Baer, neither of whom are members of the section. I wish to repeat what they told me, and I hope they will correct me if I make a mistake. They say that epulis and giant cell tumors are known to occur in various bones—even in the fingers—as well as on the jaw, together with areas of osteoporosis and rarefaction of the bones such as is present in this boy's skull, and that they occur in association with an abnormal calcium-phosphorus ratio in the blood. These are all manifestations of hyperparathyroidism. Proper operative treatment, that is, removal of the parathyroid tumor, leads to a cure, and even the giant cell tumors regress. That suggestion might at least be worth studying before the thumb is treated in any other way.

DR. GEORGE C. ANDREWS: I recently observed a disorder similar to this in a patient with a combination of hyperparathyroidism, osteoporosis and changes in the calcium-phosphorus ratio and a giant cell sarcoma on one of the digits. This syndrome is known as osteofibrosis cystica generalisata.

DR. E. W. ABRAMOWITZ: There is a possibility that this disorder is osteoporosis accompanied by a disturbance in the calcium-phosphorus metabolism. The tumor appeared only six months ago and has been accompanied by a simultaneous enlargement of the nail and all underlying structures. My co-workers and I are still undecided as to whether or not we should advise radical surgical treatment.

DR. ISADORE ROSEN: I presented this patient because of the unusual clinical appearance of the lesion. I have never seen a condition which produced such an enlargement of the nail. The diagnosis in cases of involvement of the bone is usually based on roentgen examination.

LYMPHOGRANULOMA INGUINALE. Presented by DR. J. G. HOPKINS.

C. B., a Negro aged 36, is presented from the Vanderbilt Clinic. On Sept. 9, 1935, examination revealed a painful suppurative lesion on the penis at the juncture of the frenulum, which has been present for twelve days. There are also two pinhead-sized ulcerations with rolled borders; they are nonindurated, although the mass underneath feels swollen and hardened. There is an egg-sized erythematous, somewhat tender and indurated mass in the right inguinal area. This was incised on September 14. The left inguinal area is normal. The patient has syphilis of long standing.

The Wassermann reaction of the blood was 4 plus both with cholesterolized and with alcoholic antigen. The Kahn reaction was 3 plus. On September 9 and on September 16 the Frei reaction was positive and that with a stabilized streptococcus vaccine was negative. Dark-field examination also gave negative results.

A Case for Diagnosis (Morphea of the Scalp?). Presented by Dr. Paul Gross.

F. A., a woman aged 31, born in the United States, is presented from the Vanderbilt Clinic because of a lesion on the scalp of one year's duration. The patient first noticed a bald spot a year ago. This has been gradually increasing in size. There is no history of trauma preceding the appearance of the lesion.

In the left temporoparietal region there is an elongated area about 4 cm. long and 1 cm. wide completely denuded of hair. The skin feels somewhat thickened and is yellowish except for the periphery, which is bluish red. The follicles in the affected area are entirely atrophied. The surrounding hair does not show any changes.

Dermatitis Medicamentosa Resembling Erythema Multiforme Due to Theominal. Presented by Dr. Hermann Feit.

E. B., a woman aged 52, was referred to me by Dr. G. Irving Levine. About three weeks ago the patient became acutely ill with general malaise, marked conjunctivitis, an eruption in the mouth and on the lips and an urticarial eruption on both forearms. Theominal (a proprietary preparation of theobromine and phenobarbital) had been administered for three months, in doses of 5 grains (0.324 Gm.) a day, for hypertension.

There are marked redness and edema of the conjunctivae. On both forearms and hands, mostly on the dorsal surfaces, are bluish-red, fairly sharply outlined macules, some of which have a brownish hue. There are also small areas of epidermis which have been lifted from the cutis by the exudation of serum.

MINNESOTA DERMATOLOGICAL SOCIETY

D. D. Turnacliff, M.D., *Secretary*

Dec. 13, 1935

Hamilton Montgomery, M.D., *President*

Xanthomatosis. Presented by Dr. D. D. Turnacliff, Minneapolis.

This patient was presented twice last year (Arch. Dermat. & Syph. **33**:898 [May] 1936) because of numerous pea-sized lesions of xanthoma on the arms, legs and back. He is presented now to show the complete disappearance of the lesions after his weight was reduced from 168 to 138 pounds (76.2 to 62.6 Kg.) with a balanced diet of about 900 calories.

Pigmented Nevi. Presented by Dr. H. E. Michelson, Minneapolis.

S. Z., a girl, is 10 months old. The mother states that when the child was 2 months old there appeared scattered small red lesions. These lesions have enlarged and have taken on a light brown or yellow color. No lesions have appeared in recent months. There has been no scratching. The newest lesions are on the face and neck. There are larger pigmented lesions on the trunk and extremities. A biopsy has been made, and sections stained for fat are shown.

DISCUSSION

Dr. Hamilton Montgomery, Rochester: This is an interesting case since the clinical picture is like that of nevoxantho-endothelioma, yet histologically there is none of the features of this condition but chiefly fibrosis and proliferation of

the endothelial cells. It may be that the specimen for biopsy was taken from an involuting lesion; this would account for the lack of xanthoma cells and of endothelial giant cells.

DR. L. H. WINER, Minneapolis: Dr. E. T. Bell is of the opinion that the only time he can recognize endothelial cells is when he sees a tumor consisting of capillaries in the center and solid cords and masses of cells on the periphery, these solid cords and masses having a tendency to form new blood vessels. Therefore, one can readily see that in dermatology only hemangio-endothelioma can be truly classed as endothelioma. This is borne out by the fact that competent pathologists, in studying sections of the same tumor and basing their opinions on the morphologic characteristics of the individual cell, namely, a clear cytoplasm and a relatively small nucleus, have made such varied diagnoses as fibrosarcoma, adenocarcinoma and hemangio-endothelioma. Dr. Sweitzer and I are of the same opinion as Dr. Bell, and we believe that the term endothelioma of the skin cannot truly be used to designate anything but hemangio-endothelioma.

DR. HAMILTON MONTGOMERY, Rochester: I agree essentially with Dr. Winer's view regarding endothelioma. McDonagh used the term nevoxantho-endothelioma in the morphologic descriptive sense, indicating that all three types of cells were present. Certainly there is not any neoplastic proliferation of the endothelial cells. This phenomenon is probably seen only in hemangio-endothelioma.

NECROBIOSIS LIPOIDICA DIABETICORUM. Presented by DR. H. E. MICHELSON, Minneapolis.

L. W., aged 11 years, has had diabetes since May 1935. In September 1935 "boils" appeared at the sites where insulin had been injected; these later developed into superficial ulcers and healed with peculiar red, irregular scars.

The skin of both thighs shows several scars of healed ulcers. These lesions are generally round or oval, cyanotic red and slightly scaly, but they show no waxy appearance or telangiectatic vessels. There is no tinge of yellow to any of the lesions. There are two similar purple scars on the calf of each leg. The sugar content of the blood has varied from 230 to 250 mg. per hundred cubic centimeters. Biopsies have been made, and sections stained for fat are presented.

DISCUSSION

DR. CARL W. LAYMON, Minneapolis (by invitation): The observations in this case confirm the belief based on previous cases that necrobiosis lipoidica diabeticorum is closely related to trauma of the skin. In one instance the lesions appeared after the patient had sustained a burn from a hot water bottle; in this instance the plaques appeared at the exact sites of injections of insulin where infection had occurred. One could trace the course from the infected ulcers to more or less typical plaques of necrobiosis.

DR. H. E. MICHELSON, Minneapolis: I have observed a large number of cases of pus infection in diabetic patients, but in the patient presented tonight there is enough evidence to conclude that the lesions are those of necrobiosis. In some of the reported examples of this condition, especially in those described by Balbi, echthymic lesions have been noted.

DR. CARL W. LAYMON, Minneapolis (by invitation): The lesions of necrobiosis do not respond well to diabetic management. In this respect the disease resembles diabetic gangrene more closely than diabetic xanthoma.

FIXED ARSENICAL ERUPTION. Presented by DR. SAMUEL E. SWEITZER, Minneapolis.

C. S., a man, has had syphilis since 1920. He was treated with intravenous and intramuscular injections for several months and had no evil results from the therapy. Treatment was started at the Minneapolis General Hospital in 1933. The patient has received a bismuth preparation and neoarsphenamine. After each injection the lesions became darker and itchy, but they began to disappear in from

three to four days. The patient shows no evidence of other intolerance to arsenic. The eruption appeared around the orbit and on the forearms and consisted of hyperpigmented areas 0.5 cm. and 3 cm. in diameter. There was no pruritus. The Wassermann reaction was weakly positive; the Kahn reaction was 2 plus. Patch tests with from 1 to 10 per cent aqueous solution of neoarsphenamine gave positive results.

DISCUSSION

DR. ELMER M. RUSTEN, Minneapolis: The unusual finding in this case is the fixed arsenical eruption associated with the positive reaction to the patch test with neoarsphenamine.

DR. LOUIS A. BRUNSTING, Rochester: It would be interesting to test the patient with other medications which are known to produce fixed eruptions, such as phenolphthalein, allylisopropyl barbituric acid with aminopyrine, aminopyrine and quinine. In one patient with such an eruption my co-workers and I were able to provoke a flare at the sensitized sites by the administration of either phenolphthalein or allylisopropyl barbituric acid with aminopyrine.

ERYTHRODERMA (LYMPHOBLASTOMA?). Presented by DR. H. E. MICHELSON, Minneapolis.

F. L., aged 75, states that the present illness dates back to three months ago, at which time redness of the skin, apparently a rash without vesicles and no weeping, appeared on the back. A month later it spread to the chest. Six weeks ago itching became prominent and generalized. The patient sustained an injury, and an ulcer formed on the medial malleolus of the right leg.

Examination of the blood gave the following results: hemoglobin, from 80 to 100 per cent; red cells, 4,270,000; white cells, from 7,100 to 18,000; neutrophils, from 48 to 63 per cent; lymphocytes, from 31 to 46 per cent; eosinophils, from 0 to 5 per cent; basophils, from 1 to 2 per cent; immature lymphocytes, from 0 to 5 per cent. The picture was not that of leukemia.

Biopsies of material from two axillary nodes showed chronic nonspecific inflammation. Biopsy of the skin showed nonspecific changes.

DISCUSSION

DR. H. E. MICHELSON, Minneapolis: I believe this to be one of the conditions that one cannot diagnose at the present time. Examinations of the blood, skin and glandular material give no conclusive results. There seems to be a universal inflammation. There is nothing to indicate mycosis fungoides. I think that the patient will merely have to be kept under observation and that a diagnosis will be possible only after some conclusive evidence appears.

I use the term Wilson-Brocq's erythroderma in the sense of an acute generalized reddening of the skin associated with elevation of temperature simulating scarlet fever, and in my opinion the term chronic erythroderma of Wilson and Brocq covers the exfoliative dermatoses of unknown cause.

DR. L. H. WINER, Minneapolis: In considering a differential diagnosis one should note that Dr. Michelson's patient has markedly enlarged glands, whereas a patient with generalized psoriasis has only moderately enlarged glands. The microscopic slide of glandular material from Dr. Michelson's patient shows that the structure is intact and that numerous cells of inflammatory nature are present. This may be due to drainage from a markedly inflamed skin, whereas in generalized psoriasis the skin is not nearly so inflamed. The enlargement of the glands accompanies the more marked inflammation of the skin.

DR. SAMUEL E. SWEITZER, Minneapolis: The textbooks give four groupings: (1) Wilson-Brocq's disease, (2) pityriasis rubra of Hebra, (3) Ritter's disease and (4) Savill's disease. I have often wondered whether there is any such condition as pityriasis rubra of Hebra. It was first described many years ago. These

erythrodermas often degenerate into lymphoblastoma. It is a problem to tell just what causes them. Dr. Michelson's patient probably had a much more severe illness. Patients with psoriasis frequently get well if they are given proper treatment.

DR. JOHN F. MADDEN, St. Paul: I was fortunate in seeing several patients with lymphoblastoma while I was at Dr. Wile's clinic in Ann Arbor, Mich. As Dr. Wile, Dr. Keim and others have pointed out, these disorders seem to follow no set pattern. In some cases the condition may for many years remain a generalized, pruritic erythroderma with generalized lymphadenitis without abnormalities of the blood picture; then changes in the blood finally develop, and the patient dies of leukemia. In a second group of cases lymphoblastomatous changes accompany the erythroderma from the start of the eruption. In still another group, of which Dr. Michelson and Dr. Sweitzer have demonstrated many examples, the patient has a generalized erythroderma with lymphadenitis but no lymphoblastomatous changes during the entire course of the disease. Of course, all of the aforementioned disorders exclude exfoliative dermatitis in patients with psoriasis, eczema, etc. I think that the so-called idiopathic erythroderma may or may not be associated with lymphoblastomatous changes as it progresses and that no one can prophesy such changes from the type of eruption, progress or other signs before lymphoblastomatous changes definitely appear.

DR. HAMILTON MONTGOMERY, Rochester: I wish to emphasize several points regarding erythroderma and exfoliative dermatitis. I agree that the term pityriasis rubra of Hebra represents old terminology and that a pathologic entity as such probably does not exist, many of the cases reported under this title in the older literature being instances of lymphoblastoma of one type or another. Examination of a biopsy specimen usually permits differentiation between exfoliative dermatitis due to various benign dermatoses, on the one hand, and lymphoblastoma of various types on the other, although in 40 per cent of the cases of lymphoblastoma it is not possible to specify which type of lymphoblastoma will eventually develop. I have also observed cases in which the disorder began as exfoliative dermatitis apparently on a basis of contact eczema and then cleared up only to recur from two to five years later with cutaneous manifestations and characteristics of one of the lymphoblastomas. Occasional instances of spontaneous involution of lymphoblastoma of the skin over a period of several years before recurrence took place have been reported. In cases of lymphoblastoma preceded by eczema or dermatitis, the resistance of the skin may be lowered or changed just as a persistent chronic irritation of the skin in certain persons may result in cutaneous neoplasms.

The sections from the gland in the case under discussion show features specific for Hodgkin's disease. The sections of skin are not diagnostic. Dr. Potter, working with Dr. Bell, recently emphasized the morphologic characteristics of the Dorothy Reed or Sternberg cells. Such cells, I believe, should be demonstrated before a definite diagnosis of Hodgkin's disease is made.

TUBERCULOSIS COLLIQUATIVA; DACTYLITIS TUBERCULOSA. Presented by DR. H. E. MICHELSON, Minneapolis.

I. V., a Mexican girl aged 12 years, states that she was well until two years ago. At that time she noticed a sore on the right index finger. This has not changed to any appreciable extent since its onset. Six months ago nodules appeared on the neck; these have been opened and have drained pus at various intervals. The patient states that her general health has always been good. She knows of no other occurrence of tuberculosis in her family.

The patient appears well nourished. The index finger of the right hand appears cylindrically swollen and presents a healing ulcer 1 cm. in diameter on the distal end of the proximal phalanx. This is surrounded by a cyanotic red areola. Beneath the chin and on the neck just to the right of the midline are two sinus tracts which

present considerable granulation tissue and a keloid-like scarring on the surface. There are two scars on the neck to the left of the midline which represent healed sinuses.

ERYTHEMA INDURATUM. Presented by DR. SAMUEL E. SWEITZER, Minneapolis.

V. L., a woman aged 52, complains of lesions on the calves of her legs which have been present for fifteen years and have become worse recently. The lesions started as painless subcutaneous nodules. Some became necrotic. Roentgen examination of the chest gave negative results. The patient's mother died of tuberculosis, but none of the children has had tuberculosis. A test with a 1:1,000 dilution of tuberculin gave a 4 plus reaction. Four treatments with hyperpyrexia, the temperature being raised to 105 or 106 F., have brought about marked improvement. A biopsy specimen is shown.

SARCOID (TREATED WITH DIATHERMY). Presented by DR. SAMUEL E. SWEITZER, Minneapolis.

A. W., a woman aged 51, has had tuberculosis of the hip since infancy. An aunt and uncle of the patient died of tuberculosis. The patient noticed a lesion on the right lateral aspect of the knee five years ago. This presented as a subcutaneous plaque. The patient received three treatments with hyperpyrexia in January and February 1935. The lesion began to disappear after the first treatment. The patient now has an atrophic depressed scar on the left knee. The Mantoux test gave a 4 plus reaction with 0.1 cc. of a 1:1,000 dilution. The Wassermann reaction was negative on several occasions. A biopsy specimen is shown.

ACROCYANOSIS. Presented by DR. SAMUEL E. SWEITZER, Minneapolis.

Z. T., a married woman aged 41, has had a disorder of the hands and feet since she was 10 years old. She has noticed a purple color and a feeling of cold ever since that time. She is extremely sensitive to cold and has severe pain in the extremities as a result of exposure to cold and wind. The feet and hands seem equally involved. There has never been any ulceration or gangrene. There have been no definite attacks of spasm, although the patient has noticed local syncope (pallor) in the fingers at various times. The process is much worse during the winter.

The hands and feet feel cold to the touch, and the hands have a mottled cyanotic red color. The texture of the skin appears normal, and there seems to be a normal amount of moisture. There are no ulcers or gangrenous areas. The nail of the right middle finger is friable and pitted. It has fallen out several times in the past year. The joints of the fingers are normally mobile, and no sign of scleroderma can be seen. Roentgenograms of the hands showed no abnormalities. The Wassermann test was negative. The patient refused to submit to a biopsy.

DISCUSSION

DR. SAMUEL E. SWEITZER, Minneapolis: When the patient was seen a few days ago she had cold extremities and a peculiar mottled appearance of the skin. Ordinarily patients with Raynaud's disease have trouble with gangrene of the fingers and toes. This patient has had the condition for twenty-five years and shows no changes on the extremities.

DR. LOUIS A. BRUNSTING, Rochester: The feet seem to be almost normal, but the hands are livid rather than cyanotic. The patient states that there is blanching of separate fingers on exposure to cold, which is followed by bluish discoloration and rubor, and that this process has been going on for more than twenty years. The vessels are apparently open. Such a history, with the clinical findings, would be perfectly compatible with the picture of Raynaud's disease in spite of the fact

that there is no sign of gangrene even after so many years. Erythromelalgia is extraordinarily rare and is associated with pain, but this patient has no pain. Neither is there any evidence of scleroderma.

DR. CARL W. LAYMON, Minneapolis (by invitation): The diagnosis acrocyanosis was based on three points: the feeling of cold, the cyanosis and the secretory disturbance (increased sweating). The absence of spasm and gangrene was opposed to a diagnosis of Raynaud's disease.

DR. ASHTON L. WELSH, Rochester (by invitation): Erythromelalgia is a rather rare disease. The first description of it was given in 1872 by Weir Mitchell, and definite criteria for diagnosis were mentioned in his original paper. Dr. George Brown in 1932 reviewed the literature for the previous ten years and found only one case in which the disorder conformed to the criteria necessary for the diagnosis of erythromelalgia. At the Mayo Clinic the incidence is 1 case in 200 cases of peripheral vascular disease, or 1 in a total of 40,000 registrations.

The five criteria cited by Dr. Mitchell for the diagnosis of erythromelalgia are as follows: (1) bilateral or symmetrical burning pain in the hands or feet; (2) attacks initiated or aggravated by exercise or exposure to heat; (3) relief after elevation and exposure to cold; (4) flushing, congestion and increased local temperature of the affected parts during the attacks; (5) resistance to treatment.

If these criteria are accepted for the diagnosis of this disease, it is at once obvious that this patient's condition does not fall in this group. Her voluntary statement that she has pain on exposure to cold is sufficient to rule out erythromelalgia. Likewise, the fact that though she was seen in a warm room she exhibited redness but cold and clamminess of the extremities does not conform to the criteria mentioned. I suggest that studies of the cutaneous temperature be made on this patient. I believe that her disorder belongs in the group of vasomotor neuroses.

DR. CARL W. LAYMON, Minneapolis (by invitation): The patient is rather uncooperative in that she has not returned for observation as directed. My co-workers and I believed that the complete lack of trophic changes in the twenty-five years favored a diagnosis of acrocyanosis rather than of Raynaud's disease.

STEATOMA MULTIPLEX (PRINGLE); SEBOCYSTOMATOSIS (GÜNTHER). Presented by DR. F. W. LYNCH, St. Paul.

M. R. O., a woman aged 22, states that in the past five years painless firm lesions have appeared on the chest. The old lesions are increasing in size, and new ones continue to appear. There is no acne, and only a mild seborrhea of the back is present.

The eruption is confined to the anterior surface of the neck, the chest and the upper portion of the abdomen. It consists of firm lesions which are attached to the epidermis. There is no change in the color of the overlying skin. The lesions vary from several millimeters to several centimeters in diameter. They contain an oily, yellow, odorless material which does not resemble sebum. A biopsy specimen is shown.

DISCUSSION

DR. F. W. LYNCH, St. Paul: This patient presents an unusual form of multiple cysts. Only a small number of cases of such a condition have been described, and, as far as I know, this is the first case in a woman. The odorless oily contents, the large number of lesions and the absence of seborrhea or acne establish the diagnosis. The sections show a small portion of tissue from a sebaceous gland attached to the wall of the cyst. The latest edition of Ormsby's textbook includes a description of this condition, and the histologic picture was described and demonstrated in detail by Ormsby and Finnerud. I am attempting to determine the chemical character of the contents in this case.

DR. H. E. MICHELSON, Minneapolis: I remember a disorder in a patient presented by Dr. George Olson which was similar to that in Dr. Lynch's patient. Dr. Olson, at that time, brought out the difference between sebocystomatosis and multiple sebaceous cysts. He was quoting the differentiation as given to him by Professor Arndt.

DR. SAMUEL E. SWEITZER, Minneapolis: I have seen a disorder of this type in a middle-aged woman. She must have had a hundred of these lesions on the back. The contents were like soft butter. The method of treatment I used consisted in incising the lesions with a small knife and expressing the contents. The lesions did not recur.

ONYCHOLYSIS. Presented by DR. JOHN BUTLER, Minneapolis.

J. D., a girl, went to work as a dishwasher in a bakery on October 8. Her work consisted of washing cake pans. She states that in four days, by October 12, her nails became "sore and blackened" and she was obliged to stop working. She states that the nail plates separated from the nail beds in two weeks. There was no pain while the nails were shedding. The thumb nails were not affected. The toe nails were normal. A preparation called metso was used in the dishwater. I saw the patient for the first time on November 21. The nails were growing in again at that time.

DISCUSSION

DR. H. E. MICHELSON, Minneapolis: I have seen a number of patients with partial and with complete onycholysis. The teaching of Professor Oppenheim is that these conditions are brought about by chemical irritants, such as washing powders. Dr. Butler's case is important because there is a question of compensation. The entire subject of occupational diseases needs revision in order to get a classification and a change in the laws so that when a patient has a condition which can definitely be attributed to his occupation compensation can be secured. At the present time, unless a diagnosis is made which conforms with the compensation act, the case is thrown out on technicalities.

BRONX DERMATOLOGICAL SOCIETY

HENRY SILVER, M.D., *Secretary*

Dec. 19, 1935

EUGENE F. KELLEY, M.D., *President*

A CASE FOR DIAGNOSIS (NECROBIOSIS LIPOIDICA DIABETICORUM? XANTHOMA DIABETICORUM WITH NECROSIS?). Presented by DR. SAMUEL FELDMAN.

H. D., aged 5 years, was admitted to the Morrisania City Hospital on Dec. 4, 1935. The mother states that for the past six months the child has lost weight and has suffered from increased thirst, polyuria and nocturia. Shortly after the appearance of these symptoms an eruption developed on the back of each elbow. The child's condition was mistakenly attributed elsewhere to poor nutrition, and a diet high in carbohydrate and fat content was prescribed.

The child appears ill and poorly nourished and weighs only 30 pounds (13.6 Kg.). The breathing is rapid and the pulse rate is increased, but there is no elevation of temperature. There is a definite odor of acetone on the breath. There is general adenitis. The edge of the liver is 2 inches (5 cm.) below the costal margin. Examination of the eyegrounds showed that the disks were normal in color and outline but that the blood vessels were absolutely white; it was impossible to differentiate between veins and arteries.

The knees and elbows present an eruption consisting of small hard nodules about the size of a large sago seed. Some of the nodules are pink, others are somewhat yellowish. Many of the lesions have a dark brown or black center; others are entirely black, resembling a crust. The impression gained on the first examination was that the lesions may have been injured by scratching. Subsequent observation, however, revealed the necrotic crust in the center of the lesion and absence of itching. The diagnosis of diabetes suggested itself from the appearance of the cutaneous lesions.

Examination of the urine on admission showed a 4 plus reaction for sugar and also for acetone. The blood was pink when freshly drawn and became creamy white on standing. On further inspection it was found that a blood clot formed, which floated in the white serum. The fatty substances collected on top of the specimen in the test tube, forming a wide, almost solid band.

The Wassermann test was negative. The total lipids of the blood amounted to 5.46 per cent, and the cholesterol content was 930 mg. per hundred cubic centimeters. The child was given a low fat and high carbohydrate diet, and 80 units of insulin was administered. On Dec. 3, 1935, another examination of the blood revealed a total lipid content of 5.53 per cent and a cholesterol content of 948 mg. per hundred cubic centimeters. The sugar content of the blood was 520 mg., and the urea nitrogen content, 11 mg. per hundred cubic centimeters. Thirty units of insulin was administered. Examination of the urine for choline with the Krump test showed only a moderate amount of choline. On Dec. 6, 1935, the sugar content of the blood was 85 mg. per hundred cubic centimeters, and examination of the urine showed a 3 plus reaction for sugar and also for acetone. An examination of the eyegrounds showed that the condition was gradually clearing. On Dec. 8, 1935, the sugar content of the blood was 160 mg. per hundred cubic centimeters, and the cholesterol content 312 mg.; the total fat content was 3.7 per cent. Examination of the urine showed a 3 plus reaction for sugar but no acetone. Forty units of insulin was given. On Dec. 12, 1935, the sugar content of the blood was 230 mg. per hundred cubic centimeters and the cholesterol content 326 mg.; the total fats amounted to 1.8 per cent. The color of the specimen of blood and the eyegrounds were normal. The urine showed a 4 plus reaction for sugar and no acetone. Forty-five units of insulin was given.

The lesion selected for a biopsy was a papule with a comparatively small crust in its center. The crust fell out during the cutting and left a defect. The sections were stained with hematoxylin and eosin and with sudan III.

Under the microscope the defect was seen to have undermined edges, and its base was made up of areas of denuded corium and remnants of epithelial structure. The rest of the epithelial layer showed hyperkeratosis, no parakeratosis and slight intercellular edema. In the corium a vascular dilatation, some perivascular infiltration and swelling and edema of the collagenous bundles were observed. In the upper layers of the cutis there were xanthoma cells so numerous that they were seen side by side without any visible stroma.

A photograph of the lesions on the knees in their earlier stage, a photograph of a specimen of normal blood and a photograph of a specimen of the patient's blood taken on the day of admission are presented.

DISCUSSION

DR. SAMUEL M. PECK: My conception of necrobiosis lipoidica diabeticorum has always been that there are various stages which manifest themselves clinically but especially histologically. In the first stage there is practically nothing but inflammation, and no xanthoma cells can be demonstrated. In the second stage cholesterol esters can be demonstrated lying free in the tissues between the cells and associated with necrosis, and finally a stage of fibrosis and healing develops. A case which Dr. Chargin has been studying at the Mount Sinai Hospital is interesting from this point of view. The patient was not diabetic, but he certainly had necrobiosis lipoidica of the skin plus an additional phase in which xanthoma cells could be demonstrated.

Clinically the lesion at the onset almost resembles Kaposi's sarcoma; later stages suggest sarcoid, and there is definite ulceration followed by scarring. Histologically various stages can also be demonstrated. In the lesion resembling Kaposi's sarcoma there is only an inflammatory reaction; in the sarcoid-like lesion there are xanthoma cells filled with cholesterol esters and also some free double refractory fats between the cells. I think that in Dr. Chargin's case the disorder is a link showing the relationship between ordinary xanthomas and the disease known as necrobiosis lipoidica diabeticorum. One should consider these two conditions not as separate entities but as peculiar inflammatory lesions of the skin resulting from a disturbance of fat metabolism.

DR. SAMUEL FELDMAN: There are several points of theoretical interest in this case which are more important than the clinical picture. Why should the lipids disappear after injections of insulin? Insulin, as is known, is merely a sugar-burning ferment. This patient, in addition to diabetes, has a marked lipoidosis. The disappearance of the lipids may be explained by the theory which is advanced by persons who work with extracts of tissue, namely, that the interstitial parts of the pancreas contain a lipolytic ferment. In the manufacture of insulin such interstitial tissue is necessarily included with that of the islands of Langerhans. Therefore, insulin represents not only a sugar-burning ferment but a lipolytic one as well. I believe that Dr. Peck's view that there is a gradation in the evolution of the lesion of necrobiosis, namely, that it starts from a xanthoma and ends in complete necrosis, is the correct one. I think that the rapid healing of the lesions in this case after treatment was instituted prevented further necrosis. As far as the prognosis is concerned, it is the same as it would be in the case of any child with severe diabetes.

ATOPIC DERMATITIS WITH CATARACT. Presented by DR. MARION B. SULZBERGER.

This man, aged 23, a student in a medical school, states that several members of his family suffer from asthma, eczema or hay fever. He had infantile eczema, details of which he does not recall. For many years he has had an itching eruption on the flexures of the elbows and knees. For six years, almost constantly, he has had a dermatosis on the face and scalp. For one year he had itchy lesions on the wrists, neck, chest and abdomen. There have been occasional slight, but never complete, remissions. For five years he has had occasional attacks of hay fever in the fall, and for one and one-half years, occasional attacks of asthma. Varied and intensive treatment during the past six years, including following of elimination diets and living in an allergen-free room, has brought no definite improvement.

Six months ago it was discovered by patch test that the patient was sensitive to resorcinol, mercury and tars.

Three months ago the patient had a particularly severe exacerbation of the eruption on his face, chest and abdomen. About two and one-half months ago blurring of vision in his right eye was noticed. Ophthalmic examination one and one-half months ago revealed a cataract on the posterior capsule of the right lens and a similarly situated cataract in an early stage of development on the left.

General physical examination has given negative results except for the cutaneous lesions. Blood counts and examinations of the urine have never revealed any abnormality except an eosinophilia, the number of eosinophils varying from 8 to 12 per cent. Scratch tests in October 1935 showed a 3 plus reaction to silk; a 2 to 3 plus reaction to blue-grass and lemon; a 2 plus reaction to grapefruit, cocklebur, redtop and duck feathers; a 1 plus reaction to asparagus, carrot, egg yolk, peanut, short and giant ragweed, rabbit hair, dog hair, tobacco, cotton, chicken feathers and sheep wool, and a plus-minus reaction to blue fish and corn. Passive transference has been attempted, but it was unsatisfactory because wheals developed at all the sites at which injections were made.

The cutaneous lesions have been, as a rule, papular and lichenified; they are either disseminated or confluent, forming plaques on the flexor surfaces. There has been occasional weeping of the involved cutaneous areas, particularly after certain topical applications or after prolonged scratching.

DISCUSSION

DR. MARION B. SULZBERGER: I believe that this combination of ocular and cutaneous lesions should become better known to dermatologists and ophthalmologists. To my knowledge there is only one American report on this association of symptoms; I refer to the article recently published from the Mayo Clinic by Ruby Daniel (Daniel, R. K.: Allergy and Cataracts, *J. A. M. A.* **105**:481 [Aug. 17] 1935). Since this report appeared, Dr. Brunsting told me that seven patients with disorders of this kind have been seen at the Mayo Clinic. I think there is no doubt now that there is a relationship between the ocular and the cutaneous lesions and that if this disorder is an allergic dermatitis the ocular lesions are allergic cataracts, perhaps related to the cataracts following exposure to di-nitrophenol. I think it is well for all dermatologists who see patients with atopic dermatitis to study the eye and see whether there are lesions in the lens. I believe that if a method to prevent recurrence of the cutaneous lesion is found progression of the cataracts may be prevented. I should like to have suggestions with regard to therapy. This patient has been treated by many dermatologists without benefit, and I have had no better success. Recently I have advised a complete change of climate and environment.

DR. ADOLPH ROSTENBERG: Did the patient receive roentgen radiation? It is well known that exposure of the eyes to roentgen rays may cause cataracts.

DR. MAX KAMPF: The following observation may be helpful: I recently had a patient with a severe generalized exfoliative dermatitis. As in Dr. Sulzberger's case, all forms of therapy failed. The patient secured a position in Florida, and after he had been there a short time the eruption completely disappeared, but it reappeared and was as severe as before when he returned to the city. There can be no doubt that a change of climate markedly influenced the disease.

DR. THEODORE ROSENTHAL: Recently I heard of a girl about 12 years of age who had had allergic manifestations such as hay fever, asthma, etc., throughout her life, and in whom cataracts began to develop in both eyes. That patient never received roentgen treatment.

DR. F. E. CROSS: In connection with Dr. Kampf's observation on change of climate, I can cite a case in which opposite results occurred. A man, aged 30, a resident of Florida, suffered from a generalized allergic dermatitis for three years and came to New York for relief. In spite of much therapy and hospitalization he failed to improve. At my suggestion colonic irrigations were given twice weekly. After eight treatments the eruption as well as the itching practically disappeared. Perhaps this form of therapy, so much favored by the late Dr. J. F. Schamberg, for this type of eruption should be tried on Dr. Sulzberger's patient.

DR. MARION B. SULZBERGER: I am indebted for the suggestions. I have not tried colonic irrigations in this case as yet, but I do not see any reason that they should not be tried. As to the question of roentgen treatment, the patient received a total of 2¼ unfiltered skin units (675 roentgens) to the face and neck over a period of several years, and the eyes have been well shielded. Moreover, seven cases of this ophthalmologic and dermatologic condition are reported, in four of which no roentgen treatment was given, and Dr. Rosenthal has referred to an additional case. Cataracts do not appear in cases of acne, in which a much higher dose of roentgen radiation is often given. Furthermore, the ophthalmologists who saw this patient mentioned that the lesion in the eye is of a character different from that of roentgen cataract and that there is no connection between roentgen radiation and this form of cataract. I believe that there can be no doubt that the

cataract is a part of the pathologic process affecting the skin. A change of climate has been suggested to the patient. I think that in cases of atopic dermatitis more striking therapeutic results are obtained by change in climate and environment than by any other one method.

SYPHILIS IN THE THIRD GENERATION (PRESUMPTIVE EVIDENCE). Presented by DR. ADOLPH ROSTENBERG.

This woman (first generation), aged 50, has had two children and no miscarriages. She knows of no specific infection but states that she has had cutaneous lesions since the birth of her oldest child. When she was first seen, several months ago, she presented lesions of tertiary syphilis on the forearms and legs; these cleared up promptly under treatment. The Wassermann and the Kahn reaction of the blood were 4 plus.

The woman's oldest daughter (second generation), aged 30, was born at full term and did not show any signs of congenital syphilis in infancy or at any later period. The Wassermann reaction of her blood was persistently positive. She has three children. Her husband states that he has no syphilitic infection; when examined he showed no evidence of syphilis, and repeated Wassermann and Kahn tests of his blood made at various times were negative. A thorough investigation of his wife revealed that she did not acquire syphilis at any time from any outside source.

The woman's oldest grandchild (third generation), a boy aged 6 who was born at full term, was well until the age of 4 years, when there developed spastic paraplegia, for which the child was treated in a hospital for patients with orthopedic diseases. The Wassermann and the Kahn reaction of the blood was 4 plus. An examination of the spinal fluid also gave positive results. The two other children, a boy aged 4 years and a baby aged 7 months were born at full term and have not shown any symptoms of congenital syphilis. The Wassermann and the Kahn reaction of their blood, however, were 4 plus.

DISCUSSION

DR. LEO SPIEGEL: This is an interesting case, and it merits considerable discussion, although the criteria presented leave the matter unanswered. The whole matter hinges on the question whether the mother (second generation) has congenital or acquired syphilis. The only evidence presented is that of a persistently positive (4 plus) Wassermann reaction; there is no evidence of stigmas which should be present to establish definite evidence of congenital syphilis. The child (third generation) shows symptoms of syphilis of the central nervous system and a positive serologic reaction, a not unusual occurrence in congenital syphilis; there are, however, no dystrophic changes, such as one would expect to find and which are reported to be present in patients presumed to have syphilis of the third generation. I believe that the mother (second generation) has acquired syphilis, the source of which is undetermined.

DR. F. E. CROSS: I fully agree with the remarks of Dr. Spiegel. It would be of interest to ascertain how many children were born to the grandmother (first generation) and whether they were examined for evidence of syphilis. That would help establish the evidence for congenital syphilis in the second generation.

DR. G. D. ASTRACHAN: Some time ago I described a case of possible syphilis in the third generation (*Am. J. Syph. & Neurol.* **18**:31 [July] 1934). The only difficulty in Dr. Rostenberg's case, as in mine, is the task of proving the congenital as against the acquired origin of syphilis in the second generation. According to Moore (The Modern Treatment of Syphilis, Springfield, Ill., Charles C. Thomas, Publisher, 1933, p. 442) 4.5 per cent of 171 pregnancies in 88 congenitally syphilitic mothers resulted in the delivery of syphilitic children. I am inclined to believe that the case reported tonight is one of syphilis in the third generation.

DR. MAURICE UMANSKY: The evidence for syphilis in the third generation does not seem to be convincing. It was not demonstrated satisfactorily that the mother of the child with syphilis supposedly of the third generation has congenital syphilis. She presents none of the stigmas or symptoms which occur only in congenital syphilis. She shows no hutchinsonian teeth and does not have a history of interstitial keratitis. In fact, the history does not reveal any evidence that she had a positive Wassermann reaction in early childhood or infancy.

DR. THEODORE ROSENTHAL: I am familiar with these patients. My opinion is almost identical with that expressed by Dr. Spiegel, i. e., that there is no clearcut evidence proving that the child's mother has congenital syphilis. That brings up the question whether a persistently positive Wassermann reaction also can establish congenital syphilis. I do not think so. I think if patients who have a persistent positive Wassermann reaction do not have major stigmas, one or two minor stigmas would establish the diagnosis.

DR. HENRY SILVER: The important question is whether it is possible to transfer syphilis from the second to the third generation. With respect to this there is considerable controversy. Up to 1917 the prevalent view was that not a single case exists in which all the criteria required to establish syphilis in the third generation were fulfilled. Since that time the view has been broadened, especially with the aid of the serologic tests, so that requirements as strict as those laid down by Finger and Fournier are no longer essential, and therefore Dr. Rostenberg's case can be accepted on presumptive evidence.

DR. ADOLPH ROSTENBERG: I do not want to go on record as stating that this is a clearcut case of syphilis in the third generation. However, I want to lay emphasis on the presumptive evidence. The question is: What are the requirements to establish a definite diagnosis of congenital syphilis? Are stigmas essential? Schamberg cited a long list of stigmas of congenital syphilis, and among them he mentioned a persistently positive Wassermann reaction. It has been established in the presentation (1) that the grandmother had active syphilis; (2) that the mother had a persistently positive, and her husband a negative, Wassermann reaction, and (3) that congenital syphilis was present in three of her offspring. On the basis of these factors I believe one is justified in considering this case one of syphilis of the third generation.

A CASE FOR DIAGNOSIS (PURPURA ANNULARIS TELANGIECTODES—MAJOCCHI'S DISEASE?). Presented by DR. CHARLES PINES.

F. R., aged 46, born in Italy, a barber, states that about five weeks ago he noticed an eruption above the left ankle. Since then the eruption has spread, and at present it involves both legs and, to a lesser extent, the thighs. There are no subjective symptoms. There is no history of a preceding illness, and the patient states that he has taken no drugs.

The eruption consists of discrete lesions showing no tendency to fuse. They vary in diameter from 1 to 5 cm., are roughly circinate in outline and tend to clear in the center. There is a variable number of small hemorrhagic spots varying in size from that of a pinpoint to that of a pinhead, mainly in the peripheral portion of the lesion. There is a fine superficial scale on some of the lesions. The older ones, nearer the ankle, seem to have a smooth, glassy, almost transparent appearance suggestive of atrophic change. There are a number of pigmented spots.

Physical examination gave essentially negative results. The blood pressure was 130 systolic and 70 diastolic. The dorsalis pedis and posterior tibial arteries in both legs were patent.

The Wassermann test of the blood was negative. Examination of the blood showed 4,640,000 red cells, 80 per cent hemoglobin and 11,100 white cells; there were 83 per cent polymorphonuclears and 17 per cent lymphocytes. The bleeding time was one minute; the clotting time was two minutes, and the result of the

tourniquet test was negative. The urinalysis revealed a specific gravity of 1.020, absence of albumin and sugar and occasional white blood cells and hyaline casts.

The histologic examination showed telangiectasia, a marked perivascular inflammatory reaction and hemorrhage. There were no endothelial changes.

DISCUSSION

DR. SAMUEL M. PECK: I wish to discuss the histologic changes. The sections show telangiectasia, marked, rather acute perivascular inflammatory reaction and hemorrhages. There are no changes which have been described as classic for the diagnosis presented. I found no endothelial changes. This, in my opinion, does not argue against the diagnosis because the patient may have an early stage of this disease, and classic changes may be observed at future biopsies.

DR. ADOLPH ROSTENBERG: On clinical grounds I want to corroborate the diagnosis as presented. Of all the cases of Majocchi's disease which I have seen, in none have there been more typical manifestations. There are atrophy, purpuric punctae and telangiectasia. The only objection that can be raised is in the rapid development of the manifestations.

DR. SAMUEL M. PECK: In two cases of Majocchi's disease which I have studied there were ulcerations around the ankle at some time or other during the period of observation. The ulcerations healed spontaneously, leaving marked scarring. In the literature this is regarded as a common finding, the patient suffering recurrences of ulcerations. Patients with that disease have varicosities above the knees like those seen in women after childbirth. The vessels in patients with Majocchi's disease are not normal because they are fragile, which is in contradistinction to the character of those found in women after pregnancy. I am describing a new test for capillary fragility which I have been doing for the last three years, and I have named it the "prognostic venom reaction." By means of this test I have been able to show that in persons with Majocchi's disease capillary fragility is most marked on the legs. A positive reaction to the test never appeared above the hips. I was able to obtain a marked improvement in my cases by obliterating the fine venules by means of injections of moccasin venom. It is of interest that the prognostic reaction to venom becomes more strongly positive as one approaches areas of ulceration and more and more strongly negative as one approaches normal skin above the areas in which the production of venules is marked.

DR. CHARLES WOLF: I had occasion to see this patient about one week ago. The distinctive feature at that time was the hemorrhagic element. This evening I notice a marked disappearance of the hemorrhagic element. I believe the disorder is a toxic eruption with hemorrhages. I am still of the opinion that this eruption is erythema multiforme haemorrhagicum, and I believe that it will disappear in the next four or five weeks.

DR. VAN ALSTYNE H. CORNELL: One of the previous speakers stated that the manifestations in this case appeared to him typical of Majocchi's disease. However, judging from the few cases that I have seen, I do not regard the manifestations in this case as typical at all. There are some well defined telangiectatic lesions on the lower extremities with some slight pigmentation, but I did not see the typical punctate, dark red purpuric lesions which, in my opinion, indicate Majocchi's disease. Nor did I note any atrophy. Majocchi's disease is a disorder one does not often see. I do not remember encountering more than two or three cases in the last fifteen years.

DR. MAX B. KAMPF: I agree with the diagnosis of toxic erythema. The patient admitted that he took some tablets in the past few months for rheumatic pain. The eruption appeared after that. Another possibility is that the purpuric eruption is a manifestation of the rheumatic disease.

DR. LEO SPIEGEL: I recall the patient with Majocchi's disease presented by Dr. Fred Wise a few years ago before the New York Academy of Medicine. The lesions were symmetrically distributed around the lower parts of the legs in a sort of network. This network was made up of dark red punctate forming small annular lesions with clearing centers; other lesions appeared pigmented. This is not the picture as I see it in the patient presented this evening. The lesions on the dorsa of the feet show scaling and eczematization, and as the condition undergoes involution, pigmentation is evident in various-sized patches. I should classify this disorder as eczema or toxic dermatitis.

DR. W. SACHS: I have examined the slides, and I think that this disorder is an early stage of Majocchi's disease. In erythema multiforme or in a toxic eruption there is no telangiectasia. Besides, there is free blood outside the small vessels. If the vessels were markedly dilated I could understand the rupture of the walls, but that is not present in this case. On the other hand, there is no hyaline degeneration of the vessel walls; but the condition is of comparatively short duration and degeneration may develop later.

DR. ISIDORE M. LASHINSKY: I wish to emphasize the point raised by some of the members, namely, the rapidity of the development of the eruption; this, in my opinion, is strongly opposed to the diagnosis of Majocchi's disease. Moreover, I do not think that one may expect atrophy in such a short time.

DR. WILLIAM LEIFER (by invitation): The eruption in this case shows all the characteristics of Majocchi's disease, namely, location, telangiectasia, purpuric spots which have spread peripherally and clear centers. There is what appears clinically to be atrophy and pigmentation. I cannot agree with the observation that the borders of the annular lesions are raised. As far as drugs are concerned, on repeated careful questioning the patient stated that he had taken no drugs.

PRURIGO NODULARIS. Presented by DR. MAX BERKOVSKY.

M. L., a Negress aged 23, single, born in the United States, presents an eruption which began about eight years ago on the extremities and later spread to the trunk. The patient was treated in various hospitals with little benefit.

The eruption is fairly generalized and involves the upper and lower extremities, the chest, the shoulders and the back. The lesions are papular, the size of a pea or larger, deeply pigmented and markedly pruriginous.

Urinalysis gave essentially negative results. The Wassermann test of the blood was negative. A biopsy was made at the University of Pennsylvania on Dec. 4, 1934. The histologic examination showed hyperkeratosis and acanthosis. There was an increase in pigmentation, edema and perivascular round cell infiltration in the corium; a number of the cells were eosinophils. The sections suggested prurigo nodularis.

DISCUSSION

DR. F. E. CROSS: The outstanding feature of prurigo nodularis, which is a rare disease, is the characteristic nodules which involve the extensor surfaces of the legs and forearms and are associated with severe itching over a prolonged period. This patient presents all the features of prurigo nodularis.

DR. MARION B. SULZBERGER: There are several elements in this case that are not quite typical. The first atypical feature is that this eruption did not appear in childhood but at the age of 16. The second atypical feature is found in the many disseminated lesions over the chest and other parts of the body. However, I do not think that these two unusual features are sufficient to exclude the diagnosis of prurigo nodularis, as both are occasionally found in this disease. The appearance of the lesions and the history of severe itching are sufficient to support the diagnosis as presented.

DR. G. D. ASTRACHAN: Some time ago Dr. Cornell and I had the opportunity to observe a case of prurigo nodularis in a Negro. The patient had been under

the care of Dr. Howard Fox, who also diagnosed the disorder as prurigo nodularis. Dr. Berkovsky's patient is also a Negro; it is of interest to stress this point.

DR. HENRY SILVER: Hyde's disease is a clinical entity and should not be confused with other forms of prurigo. The eruption occurs mostly in women. The lesions are large, nodular or papular, sparsely distributed over the legs and other parts of the body, extremely itchy and resistant to therapy. Because of these large lesions the French call the disease *prurigo à grosses papules.* The unusual features in this case should not militate against the diagnosis, because this eruption is probably a rare instance of dissemination of lesions in a patient with prurigo nodularis, as recorded by Pautrier.

DR. MARION B. SULZBERGER: Recently Masson has claimed that he has found histologic evidence of nerve elements in the lesions in cases of this type of prurigo. He thinks that the pathologic process underlying the formation of these nodules is primarily of nervous origin.

GRANULOMA INGUINALE. Presented by DR. DAVID BLOOM.

E. F., a Negress aged 30, from the service of Dr. Howard Fox at the Bellevue Hospital states that about one year ago a lesion developed in the posterior aspect of the intergluteal region. There is a round raw granulomatous lesion the size of a dollar. The Wassermann test of the blood was negative. The Frei test and examination for Donovan bodies gave negative results.

GRANULOMA INGUINALE AND TERTIARY SYPHILIS. Presented by DR. CHARLES PINES.

E. D., aged 20, a Negro porter, born in North Carolina, was admitted to the Bellevue Hospital on Oct. 28, 1935. About three years ago he suffered from a gonorrheal infection, a penile sore and a rash on the body, for which he received, in addition to local treatment, four intramuscular injections. About six months before the patient was admitted to the hospital there developed a small ulceration in the right groin, which progressed steadily.

There are marked paraphimosis and an ulcerated area covering almost the entire right inguinal region, extending downward to the perineum and encircling the prepuce at the site of the paraphimosis. The ulcerations are superficial and have somewhat raised borders; they produce little pain or discomfort. There is no involvement of the lymph nodes.

The Wassermann reaction of the blood was 4 plus on two different occasions. Urinalysis, except for showing a trace of albumin, gave essentially negative results. Donovan bodies were not found after a careful search on three occasions.

The lesion showed considerable improvement after injections of antimony and potassium tartrate and antisyphilitic treatment consisting of six injections of bismuth subsalicylate and six injections of neoarsphenamine.

DISCUSSION

DR. ADOLPH ROSTENBERG: I do not think that there is any doubt about the diagnosis of granuloma inguinale in both of these cases.

DR. SAMUEL M. PECK: I wish to demonstrate a few characteristic pictures of the organism which either is the cause of or is closely associated with granuloma inguinale. I pointed out when I first isolated this organism that it was difficult to find the typical Donovan inclusion bodies in smears, although they are easily demonstrated histologically. On examination of cultures one is impressed by the pleomorphism of this organism, and in smears one can find such pleomorphic forms outside of cells. That may be due to the fact that the capsule or capsule-like structure in which they are found histologically is dissolved by the method of staining generally used. The most common picture is that of coccobacilli arranged in rows of threes. In cultures these appear as parts of one organism. One can

also find diplobacilli and whole nests of bacillus-like forms which are so short that they resemble cocci. While I am not absolutely certain that I was able to isolate the causative organism of granuloma inguinale, at least the form which I have just described is closely associated with the disease and can lead to a diagnosis. It has been forgotten that with a vaccine made of such organisms I have obtained, in cases of granuloma inguinale, positive cutaneous reactions which are comparable to the Frei reaction (Cornwall, L., and Peck, S. M.: Etiology of Granuloma Inguinale, ARCH. DERMAT. & SYPH. **12**:613 [NOV.] 1925. Goldzieher, M., and Peck, S. M.: Venerisches Granulom, *Virchows Arch. f. Path. Anat.* **259**:795, 1926. Goldzieher, M., and Peck, S. M.: Granuloma Inguinale, ARCH. DERMAT. & SYPH. **14**:14 [July] 1926).

DR. DAVID BLOOM: In Dr. Pines' case the scar in the left inguinal region is probably that of a chancroid bubo, since the patient states that he had a bubo which burst spontaneously three weeks after its appearance. As to elephantiasis of the vulva or of the penis, it occurs more frequently in association with lymphogranuloma venereum than with granuloma inguinale. In my case the examination for Donovan bodies gave negative results. In spite of this the clinical diagnosis is granuloma inguinale. In the future I shall bear in mind the microscopic picture described by Dr. Peck.

A CASE FOR DIAGNOSIS (MONILIASIS? ERUPTION DUE TO A DRUG?). Presented by DR. ISIDORE M. LASHINSKY.

B. T., a Russian Jewess aged 66, a widow, was seen in the Morrisania City Hospital because of lesions at the angle of the mouth and a somewhat painful, occasionally burning tongue. The patient has had high blood pressure and has received medication, which was found to be phenobarbital.

There are macerated, fissured lesions on an erythematous base at the corners of the mouth. The tongue is grayish brown and smooth and shows a few atrophic patches. Cultures from the scrapings of the tongue revealed Monilia. A complete blood count failed to show pernicious anemia.

The patient is presented to ascertain definitely whether the glossitis and the atrophy are due to moniliasis or to the ingestion of phenobarbital.

DISCUSSION

DR. SAMUEL FELDMAN: In spite of the smoothness of the tongue I did not think of pernicious anemia. Because of the perlèche, my first thought was moniliasis of the tongue. Moeller's glossitis can be ruled out because the atrophy is in the center rather than at the sides. Moreover, an examination of the blood showed that the patient does not have pernicious anemia, and the scrapings of the tongue showed moniliasis.

DR. MARION B. SULZBERGER: The tongue seems somewhat atrophic, and there are patches of redness on the dorsum and also on the sides. The yellowish appearance of the patient is rather suggestive of pernicious anemia. Moreover, there are other symptoms that suggest pernicious anemia. The patient states that she falls easily and has difficulty in walking. This is rather suggestive of the lesions of the cord occurring in pernicious anemia. It is quite possible that the typical hematologic picture has not yet developed. I think that at any rate liver therapy is indicated. Furthermore, I suggest that an examination be made to see whether there is any free hydrochloric acid and whether Castle's intrinsic factor is present.

DR. SAMUEL FELDMAN: The fact that the patient falls and has difficulty in walking is due, I believe, to her poor vision, her sight being impaired by cataracts.

DR. ADOLPH ROSTENBERG: My impression is that this is a case of Moeller's glossitis. It seems that the conception of this condition has undergone a change in the last ten years. Formerly it was not considered to be associated with pernicious anemia. Harris, who studied a number of cases, reported that he found

intestinal parasites and that he considered this to be the cause. This patient states that she has severe pain in the tongue, and that is one of the characteristic signs of Moeller's glossitis. The location of the patches is of no importance; any part of the tongue may be affected.

DR. ISIDORE M. LASHINSKY: Dr. Sulzberger's suggestions are well taken. I shall repeat the blood count and determine the question of achylia gastrica.

PSORIASIS AND AN UNUSUAL FORM OF PSORIATIC ARTHROPATHY. Presented by DR. MARION B. SULZBERGER.

S. E., a man aged 48, first came to the Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital presenting an eruption of ten years' duration. The patient states that the condition began on the scalp and then appeared on the buttocks. He first noticed changes in the nails about five years ago, and the general involvement developed during the past year.

A present there are numerous discrete and confluent erythematous patches scattered throughout the scalp. These patches are covered with thick mica-like scales. There are similar patches in the gluteal folds. All the nails of the hands and some of the nails on the feet are grayish black. The distal half of the nail is elevated from the nail bed. The nails are lusterless and brittle. Beneath the nails there is considerable grayish-white material. There is considerable swelling of the distal phalanges of the right middle and fifth fingers and of the left ring finger. There is a similar involvement of the second right toe. The patient received several roentgen treatments (the amount of radiation he received is not known) about one year ago, but no improvement occurred.

The Wassermann, Kahn and Kline tests and examination of the urine gave negative results.

Roentgenograms of the hands showed thickening and enlargement of the soft tissue at some of the terminal phalanges. However, the swelling of the soft tissue and the capsular distention observable mainly at the terminal interphalangeal articulations of the little and middle fingers of the right hand and the same joint of the ring finger on the left hand appeared to be of major importance. There were peculiar punched-out areas of rarefaction at the articular margins, particularly at the bases of the terminal phalanges. Though, as a background, chronic pulmonary osteo-arthropathy and further neurologic disturbance may exist, in view of the multiple punched-out areas in some of the articular borders, the possibility of a gouty diathesis is also deserving of consideration.

DISCUSSION

DR. DAVID BLOOM: The peculiar swellings of the end-phalanges of the fingers, which suggest paronychia, are seen frequently in cases of psoriasis, particularly of the exudative types.

DR. ADOLPH ROSTENBERG: The more cases of so-called psoriasis arthropathica one sees the more confused one seems to be. I cannot see how the picture in this case fits in with psoriasis arthropathica. If one calls this disorder psoriasis arthropathica one must establish a relationship between psoriasis and the arthropathy. In typical cases there is usually an interplay between the psoriatic lesions and the involvement in the joints which is absent in this case.

DR. HENRY SILVER: I agree with Dr. Sulzberger's conception that in his case the manifestations do not represent the syndrome known as psoriasis arthropathica. One sees enough cases of these disorders to be able to differentiate between the syndrome of psoriasis arthropathica and psoriasis associated with arthritis. Another point I should like to emphasize is that the patient is a window cleaner, and in view of that the question of psoriasis and trauma must be considered.

DR. MARION B. SULZBERGER: As Dr. Silver brought out, I have called the disorder in this case psoriasis with arthropathy, and it is precisely for this reason that the patient is presented. The disorder represents neither the type of psoriasis

of the skin nor the type of arthropathic lesions that one sees in cases of arthropathic psoriasis. Nevertheless I am convinced, since I observed this case and one of an identical condition presented by Dr. George Lewis, that the arthropathy is psoriatic. I believe that Dr. Silver's conception of the possibility of trauma's being a factor is supported also by Dr. Lewis' case, that of a housewife who did a great deal of washing.

JUXTA-ARTICULAR NODULES IN SYPHILIS. Presented by DR. MARION B. SULZBERGER.

Z. B., a woman aged 52, first came to the New York Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital on Nov. 2, 1935. At that time she presented on the extensor surface of the left forearm, just below the elbow, two purplish-red lenticular painful papules the size of a pea. In the vicinity of these were two or three subcutaneous nodules, also the size of a pea. On the extensor surface of the right forearm, just below the elbow, was a fusiform firm subcutaneous swelling of which the patient was not aware. The patient complains of pain extending down the left arm from the shoulder to the finger-tips and of loss of power of the grip. There is a tender node in the left axilla.

The Wassermann reaction of the blood was 4 plus.

The patient has received two injections of bismuth subsalicylate. All the lesions have disappeared except one small nodule on the left forearm, about 3 inches (7.5 cm.) below the elbow.

DISCUSSION

DR. MARION B. SULZBERGER: I must apologize for presenting this diagnosis. I do not believe that these nodules, of which only one now remains on the patient's elbows, are the characteristic nodules which one sees in cases of acrodermatitis chronica atrophicans or syphilis. The true juxta-articular nodules of syphilis do not usually react favorably to antisyphilitic treatment. The nodules in this case disappeared rapidly under treatment. They were therefore probably some form of subcutaneous nodule of a late stage of secondary or an early stage of tertiary syphilis.

DR. THEODORE ROSENTHAL: I had the occasion to treat two patients with juxta-articular nodules; in one of the cases the diagnosis was proved by biopsy. As I recall, neither patient responded to therapy. In the case in which a biopsy was made the section showed a dense fibrosis and no histologic evidence of syphilis. The fibrosis was so dense that I could not see how any therapy could influence the process.

DR. MARION B. SULZBERGER: The biopsy in this case showed typical nodular syphilis. No granulation tissue was seen in the sections. A clinical diagnosis of syphilis was made without the biopsy.

DR. W. SACHS: The sections showed a considerable amount of fibrosis in the deep cutis.

DR. MARION B. SULZBERGER: I think that this case is interesting in that it demonstrates what may be the origin of syphilitic juxta-articular nodes. Perhaps if no treatment were given there would eventually be a preponderant fibrosis in these lesions. The specific alterations would gradually disappear; the fibrosis (which was already present) would gradually increase, and the eventual result would be the fibrotic and unyielding juxta-articular nodes.

KERATOSIS PILARIS. Presented by DR. SAMUEL FELDMAN.

E. G., a schoolgirl, presents numerous small horny follicular plugs either grouped in patches or scattered discretely over the face, arms and legs. She states that she has had the condition as long as she can remember. On the face, in addition to the follicular plugging, there is a marked redness which ends in a sharp line in front and below the ear. This line corresponds approximately to the distribution of the beard in a man. There is a mild seborrhea of the scalp.

DISCUSSION

DR. C. LERNER: I agree with the diagnosis of keratosis pilaris. In view of the youth of this patient, the redness of the cheeks does not seem to be an unusual finding. The somewhat sharp delineation may be considered merely as coincidental.

DR. MARION B. SULZBERGER: I think that one has to consider the possibility of an early stage of ulerythema ophryogenes, in spite of the fact that no atrophy is present and that the eyebrows are not affected. The associated symptom of keratosis pilaris is characteristic of that disease. In fact, some observers think that ulerythema ophryogenes is an unusual form of keratosis pilaris.

DR. CHARLES A. GREENHOUSE: I wish to suggest the possibility of an aberrant type of pityriasis rubra pilaris rather than keratosis pilaris. Some of the lesions are fine acuminate follicular papules, accompanied by some scaling. The other possibility is that the condition is a nevus.

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ELEPHANTIASIS NOSTRAS FOLLOWING OPERATIONS FOR VARICOSE VEINS. Presented by DR. F. D. WEIDMAN.

G. M., a man aged 67, presents varicose ulcers on both legs of thirty years' duration. On the posterior aspect of the left leg, below the knee, the transverse scar of an operation is visible. Below it the leg is definitely enlarged, the enlargement being due mostly to edema. The foot, however, particularly the great toe, is highly elephantiasic. An ulcer extends over the entire lower half of the left leg. The ulcers have healed partially as a result of treatment with wet dressings and roentgen radiation during the patient's stay in the hospital in the last six months.

DISCUSSION

DR. F. D. WEIDMAN: This serves as an impressive example of one of the worst results that follow this operation. There has been some discussion as to the propriety of injections. Some surgeons state that because of the danger of thrombosis injections should not be made into veins unless the vessels are first ligated. This patient has had five operations, one of which was radical, and obviously the destruction of tissue has interfered with the venous circulation, inducing edema and a terminal elephantiasis. The leg is useless, and the patient wants to have it amputated. It is doubtful whether this will be done, but in any event this experience will support a conservative attitude on surgical operations and the extent to which they may or may not be performed in cases of varicose veins.

DR. S. S. GREENBAUM: I agree with the diagnosis of elephantiasis nostras, but there is a question whether the condition of this patient is purely an obstructive disorder following the operation or whether it is an infiltrative condition. The patient presents a superficially indurated tongue highly suggestive of syphilis, and I believe that he should have the benefit of antisyphilitic treatment before a radical surgical procedure is resorted to.

A CASE FOR DIAGNOSIS (DERMATOPHYTID?). Presented by DR. F. D. WEIDMAN.

R. T., a man aged 38, states that four weeks ago a generalized erythemato-squamous eruption appeared over most of the torso. It occurred a few days after the patient had done some painting. On admission the hands and feet were hugely swollen by edema and covered with pustules and blebs. The face was lurid red. The tongue was not red, and there was no diarrhea. The patient stated that he had not indulged in alcoholic excesses immediately before the acute outbreak, although he admitted that was addicted to sprees. In ten days the entire eruption had largely healed, but suddenly the hands again became swollen; at present only a branny desquamation remains. The patient has marked dermatophytosis of the feet. A few days before the appearance of the disorder he had slept in weeds and awoke to find his hands and face red. Later minute vesicles and burning developed. Under mild, palliative local treatment the condition cleared up; the patient underwent a herniorrhaphy and was discharged with the following provisional diagnoses: erythema solare, dermatitis venenata (due to Rhus toxicodendron), secondary pyoderma. Examinations of the urine, studies of the chemical composition of the blood and the Kahn test gave negative results.

DISCUSSION

DR. F. D. WEIDMAN: My object in presenting this patient was to bring up the matter of the extent to which dermatophytids in general may be expressed. This is an extremely extensive eruption, widely generalized but not quite universal, rather comparable to what is seen in a case of severe dermatitis medicamentosa. The first impulse was to regard the condition as pseudopellagra, and the second, to make a diagnosis of dermatitis venenata due to turpentine, but when the second flare-up appeared, while the patient was in bed in the hospital my co-workers and I came to the conclusion that we should have to change the diagnosis, and by exclusion it seemed we should have to treat the disorder as a dermatophytid. In doing that I felt that it was easy to run riot in this matter of dermatophytid and that the question might be raised as to whether the members of the society believed that nowadays larger numbers of what they regard as dermatophytids are seen than formerly, and if so, whether they are absolutely sure of their ground in regarding those disorders as dermatophytids. That is, should a halt be called before diagnoses of extensive and acute dermatophytid are made too freely?

DR. W. O. ROOP, Atlantic City, N. J.: May I ask Dr. Weidman what microscopic work has been done as to isolating any fungi in this case? I am somewhat inclined to diagnose the disorder as pseudopellagra. This patient states that he repeatedly indulged in alcoholic sprees, and his diet has been deficient; these facts make the diagnosis of pseudopellagra tenable.

DR. FRANK C. KNOWLES: I think this is an absorptive toxic eruption. I do not think that it is a dermatophytid. The hands and feet show much humus, which probably contains all kinds of organisms.

DR. CARROLL S. WRIGHT: Dr. Osborn recently brought out an important point in regard to sensitization of the skin in patients who have a mycotic infection of the hands and feet. In speaking of industrial dermatitis he stated that as long as the patients have an acute mycotic infection of the hands and feet it is almost impossible to clear up their occupational dermatitis. It occurs to me that many of the disorders which are regarded as dermatophytids merely represent sensitization of the skin as a result of some toxic process caused by the mycotic infection, and ordinary soap and water and other local irritants may produce this picture. I have observed two or three cases lately in which I believed definitely that sensitization, rather than a true dermatophytid, was the trouble.

DR. S. S. GREENBAUM: I think Dr. Weidman's point is well taken. It is a question of what one ought to include in the concept of dermatophytid. In the last fifteen years I have seen only two or three instances of generalized dermato-

phytid in connection with tinea of the extremities, the lower extremities in particular, and I do not see how one can make a diagnosis of dermatophytid except in the presence of an actual concurrent lesion in which the microscopic studies give positive results. Clinically there is nothing special about dermatophytid, and I think that in many cases that diagnosis is made only on general principles. I have seen two or three generalized erythema multiforme-like eruptions which cleared up in three or four weeks as a result of soothing applications just as the lesions of tinea themselves cleared up. I do not think that the last word has been said on dermatophytid in conjunction with acromycosis.

DR. J. V. KLAUDER: I think that clinically the picture is that of an ordinary erythematous, scaly eczema. No one can doubt the possibility that it may be a dermatophytid. It depends on one's conception of the picture. As I understand it, the only recognized dermatophytid is the follicular type of lesion which is seen in the deep-seated ringworm infections. I do not believe that the diagnosis of pellagra could be made from the clinical picture, despite the fact that there is a history of alcoholism. And the eruption does not conform to the picture of follicular dermatophytid.

LICHEN PLANUS WITH HYPERTROPHIC AND ATROPHIC LESIONS AND LESIONS OF LICHEN PLANOPILARIS. Presented by DR. J. LAMAR CALLAWAY, for DR. JOHN H. STOKES.

T. K. D., a man aged 65, apparently in good health, presents over the lower portion of the legs violaceous, lichenified, indurated, plaquelike lesions of two years' duration. Over the trunk and flanks there is a similar eruption, but the papules are less hypertrophic, and in some areas the lesions are atrophic. There are occasional lesions like those of lichen planopilaris. The mucous membranes are not involved. The Wassermann reaction of the blood was negative. The report on a biopsy was as follows: sections from the follicular and atrophic lesions are not distinctive; those of hypertrophic lesions are compatible with but not distinctive of hypertrophic lichen planus.

DISCUSSION

DR. S. S. GREENBAUM: I think that one of the lesions on the cheek is a plaque of lichen planus and that the pigmented lesions on the back could easily pass for the pigmentary remains of similar lesions. I saw no signs of lichen planus on the extremities.

DR. CARROLL S. WRIGHT: Some of the lesions on the legs looked like papulonecrotic tuberculids. Other lesions on the legs and trunk are typical of lichen planus. The patient may have had more than one condition, for the large papules with the necrotic centers certainly are not lesions of lichen planus.

POSTOPERATIVE ACTINOMYCOSIS OF THE SUPRA-APPENDICAL REGION OF THE ABDOMINAL WALL. Specimen presented by DR. FRED D. WEIDMAN.

In M. H., a man aged 51, who was obese and diabetic, an erythematosquamous spot developed above the umbilicus two and a half years ago; this was succeeded by a swelling the size of a 50 cent piece. Six months later the swelling burst, discharging pus and blood. The "ulcers" healed and reopened successively. Operation was performed ten days ago; the indurated tissue was traced as deep as the intestines, though obstruction had not been induced. The origin was somewhere in the ileum. Dermatologically, there was an area of scar tissue 3 inches (7.5 cm.) in diameter, within which there were three or four pea-sized dusky red granulomatous nodules. Pus exuded from the summit of one. It was suggestive superficially of nodular syphilis or lupus vulgaris, but the localization prompted, and the mycologic examination of pus established, the diagnosis. Laboratory examinations gave the following results: The sugar content of the blood was 180, 195 and

229 mg. per hundred cubic centimeters. The blood count showed 2,800,000 red cells and 600 white cells. The differential count showed 64 per cent polymorphonuclears, 33 per cent lymphocytes and 3 per cent transitionals. The basal metabolic rate was + 9 per cent. The Wassermann reaction was negative. The urea nitrogen content of the blood was from 8 to 10 mg. per hundred cubic centimeters. In smears of pus, ray fungi (without clubs) were found. The results of a biopsy were as follows: Ray fungi were not found in foci of necrosis; the process was essentially a diffuse dense cicatricial one with scattering round cell infiltration throughout.

DISCUSSION

DR. F. D. WEIDMAN: The cutaneous manifestations in this patient were four or five granulomas, one of which was perforated by a sinus. There were no sulfur granules in the pus; the granules were white, and hence the causative micro-organism was not Actinomyces bovis but perhaps that of the nocardiosis cutis reported by Dr. William Guy some years ago. However, unlike that in Dr. Guy's case, the disorder originated in the intestines. The patient was a bad operative risk and died on the day after the operation. Surprisingly little pus was found; that is, the clinical picture was different from that which is seen in cases of actinomycosis. I think that the practical point to this presentation is the fact that the fungi found in the pus did not have clubs; there were filaments radiating from the center, but no clubs. In the future, when this characteristic is encountered one should consider the condition as a different clinical as well as etiologic entity. The reaction is not nearly as widespread or as suppurative as ordinary actinomycosis, and I think that one will be able to give a good prognosis if surgical treatment is used; if this patient had been a good operative risk he would have survived. The point of real interest in this presentation is that there are probably some cases of actinomycosis (really nocardiosis) in which one will find out some day that the prognosis may be good.

TROPHIC ULCERS OF THE FINGERS DUE TO CERVICAL RIBS. Presented by DR. F. D. WEIDMAN.

J. N., a boy aged 6 years, an active, well nourished child, shows markedly deformed, thick and opaque nails of the right thumb and forefinger and short distal phalanges. A deep, sharply marginated and indolent ulcer is present over the tip of the forefinger. Another ulcer on the palmar surface of the thumb is surrounded by a remarkably thick layer of hyperplastic keratinous material. Over the right elbow there is an ovoid scar. The fingers and the wrist are freely movable, but the arm cannot be freely abducted, owing to atrophy of the muscles of the shoulder and arm. There was diminished sensation in the right arm and hand, but sensation has gradually returned. The limitation of motion was noted early in life. Cervical ribs were demonstrated roentgenologically, the one on the right being larger than the one on the left side. The Kahn test was negative.

DISCUSSION

DR. D. M. SIDLICK: I saw a man aged 22 who stated that the first symptom of cervical ribs he became aware of was a sharp shooting pain in his fingers which subsided but later returned and was followed by swelling first of the fingers, then of the hand and finally of the arm. Removal of cervical ribs caused the swelling to subside gradually, and the patient regained full function in his fingers, although some edema still persists.

RESISTANT PSORIASIS. Presented by DR. J. V. KLAUDER.

S. C., a man aged 28, presents generalized psoriasis over the trunk, extremities, scalp and nails. His condition at present is the best in which he had ever been

during the twenty-one years in which the condition has been present. It began on the elbows and knees, and at times it affects the entire body. The patient has been treated with ultraviolet irradiation, autohemotherapy, oral and intramuscular administration of liver extract and local applications of chrysarobin.

DISCUSSION

DR. V. C. GARNER: While because of its onset at the age of 7 years one must regard the disorder as basically psoriasis, one can hardly escape the possibility that at present it represents a transition into mycosis fungoides.

DR. J. V. KLAUDER: The patient is presented for that reason. He has a picture typical of psoriasis; there has never been any itching that might characterize mycosis fungoides, nor has he presented any typical lesions of mycosis fungoides. The disorder has been extremely resistant to treatment for the past ten years. It has never been as limited as it is now. The improvement is attributed to the fact that the patient has received ultraviolet radiation twice a week throughout the past eight months. The sulfur content of the skin was double the normal, and now that the disorder has cleared up the sulfur content has decreased, but it is still above normal.

DR. V. C. GARNER: I should like to have a subsequent report. I believe that one cannot overlook that marked, almost fleshy infiltration of the lesions on the legs.

DR. CARROLL S. WRIGHT: I wish to suggest a therapeutic procedure which is often lost sight of, namely, confining the patient to bed and using injections of typhoid vaccine and applications of chrysarobin ointment. I have seen resistant psoriasis clear up temporarily as a result of these procedures.

DR. S. S. GREENBAUM: I believe that when a psoriatic patient is ingesting alcohol in as large quantities as this patient does it is almost impossible to clear up the disorder, no matter what is done. Of course, under Dr. Wright's plan and in a patient who is not taking alcohol the result would be different, but in the case of patients ingesting alcohol I have failed repeatedly to benefit the psoriasis.

LYMPHOGRANULOMATOSIS INGUINALIS. EDEMA OF THE EYELIDS OF UNDETERMINED NATURE. Presented by DR. F. D. WEIDMAN for DR. ROBERT HUNTER.

H. B., a Negro aged 35, presents edema of both eyes of five years' duration, chronic thickening and hyperpigmentation in the groin, edema of the penis and scrotum, generalized pigmentary patches over the torso in the distribution of an old eczema and patches in the flexures of the elbows. The patient states that he had repeated acute attacks of fever, with discharge from the nose. He had septicemia in 1932; this was followed by a pansinusitis. Laboratory examination showed that the globulin-albumin ratio was reversed. The Frei reaction was positive.

DISCUSSION

DR. F. D. WEIDMAN: The point of interest in this case is the extreme duration of the puffiness around the eyes. Dr. Hunter said that he had never seen edema like this as a result of pansinusitis. When I saw the patient he had an acute exacerbation, and I considered the possibility of acute lupus erythematosus, but the subsequent course showed that the disorder was not that. I thought that the edema of the penis and scrotum might also be a consequence of the treatment which the patient had received. But Dr. Hunter's co-worker has made a Frei test; the remains of the positive reaction can be seen on the patient's arm tonight, and the question at once arises whether the lesion around the eyes is a part of the whole complex. There are no scars in the groins, but the skin there is thickened. My object in presenting this patient is, if the diagnosis of lymphogranulomatosis inguinalis can finally be established, to consider whether the edema of the eyes is

just one more of the associated cutaneous changes to be cataloged in connection with that disease.

DR. DONALD M. PILLSBURY: I was much interested in the lesions on the trunk. At first glance one might almost regard them as involuting lesions of pityriasis rosea. I do not wish to encourage enlarging the concept of ids, but it seemed to me quite possible that this disorder falls into the class of lymphogranulomatids. I think the members will recall Saenz' report (ARCH. DERMAT. & SYPH. **31**:348 [March] 1935). There have also been several reports in the European literature of lesions of various types occurring on various sites over the body in association with lymphogranulomatosis inguinalis. Whether an id could occur so long after the disease had developed or not, I do not know. As I recall, in most cases lesions begin to appear within a fairly short time after the development of the primary process. I think the point Dr. Weidman made in regard to this case is a good one.

DR. S. S. GREENBAUM: I have seen many cases of so-called tropical bubo, but I do not recall having seen any eruption connected with this disease. I do not know of any disease due to a virus that produces what might be called an id.

DR. GEORGE FONDÉ: This cutaneous eruption is totally different from the one I observed with Dr. Goldberg. In our patient a papular eruption developed on the neck. We made a filtrate from the papules and tried to elicit the Frei reaction with the extract of these papules, but the reaction was negative. The eruption flared up at several intervals of about two or three weeks. Finally under treatment —we are trying a new preparation of antimony in this case—the inguinal lesions involuted rapidly, and when they had practically disappeared the cutaneous eruption also involuted. I have seen the patient several times; there has been no recurrence.

CUTANEOUS CALCIFICATION (POSTTUBERCULOUS?). Presented by DR. F. D. WEIDMAN.

J. G., a Negro boy aged 5 years, shows a diffusely swollen left elbow. There are fluctuating nodules measuring up to 3 cm. in diameter; one is located on the scalp and one under the chin. There are also firm subcutaneous nodules—three or four over the upper part of the back, two or three over each arm and two or three around each knee joint. There is generalized adenopathy, which is particularly marked in the axillae. The patient was admitted to the hospital on June 12, 1935; there was a history that ulcerative areas had been present for two years. A diagnosis of tuberculosis was said to have been based on biopsy of the skin and roentgen examination of the chest, but this statement could not be verified. The tuberculin test was negative. Laboratory examinations gave the following results: The first smears showed gram-positive diplococci, morphologically classified as pneumococci. Later direct smears and cultures gave negative results. Inoculation of guinea-pigs gave negative results for tuberculosis. The Kahn test was negative. Calcium was present in high concentration in the "pus." The calcium content of the blood was 10 mg. per hundred cubic centimeters; the phosphorus content, 5.2 mg. The cholesterol content of the plasma was 176 mg. per hundred cubic centimeters, and the cholesterol esters amounted to 70 per cent. Roentgenograms of the chest showed a focus of softening in the lung behind the second intercostal space on the left. Biopsy showed focal calcification of subcutaneous tela. There was no evidence of tuberculosis, and stains for the tubercle bacillus failed to reveal the organism.

The patient has received roentgen and ultraviolet radiation, viosterol, solution of potassium arsenite and cod liver oil. A 5 per cent solution of tannic acid had been applied to the open lesions.

DISCUSSION

DR. F. D. WEIDMAN: This patient was first seen six months ago. There is an additional development since then, namely, the diffuse enlargement of the left

elbow, which I regarded as indicative of a white swelling, but the roentgenograms show no involvement of the joints. My co-workers and I thought right along that the condition was tuberculous, but inoculation of guinea-pigs, and histologic and roentgen examination have failed to establish the diagnosis. The disorder seems to be calcinosis. The nodules show a dense, dark shadow on the roentgenogram. The phosphorus content of the blood is elevated 50 per cent.

Dr. Frank C. Knowles: This patient received a considerable amount of viosterol. It is a known fact that viosterol in excessive dosage produces calcium salts. If that is so, there is a possibility that the ingestion of viosterol may have some bearing on the disorder.

Dr. S. S. Greenbaum: I do not think that Dr. Weidman means to designate the case as one of calcinosis cutis, because the condition as it is manifested here is preceded definitely by cold "abscesses," not by acute inflammatory phenomena, and in the lesions there is a definite skiagraphically demonstrated deposit of calcium. While it is true that no tubercle bacilli have been found in any of the lesions, I know of no condition other than tuberculosis that produces abscesses of this sort followed by the deposition of such an immense amount of calcium. It is possible that the viosterol has led to that deposition. It is also possible, even though the tuberculin test is negative, that the patient is in a state of anergy, and it is also possible that the condition is due to a filtrable form of the tubercle bacillus. I suggested to the intern when the patient first came under my observation that when the guinea-pigs were inoculated with pus from one of the lesions they be tested first with tuberculin and then tested again in the third or fourth week, preferably with purified protein derivative. It has been shown that after an apparently nontuberculous pus has been injected into guinea-pigs and in the absence of gross or microscopic signs of tuberculosis in such guinea-pigs, the animals show a positive reaction to tuberculin when previously they had shown a negative reaction.

A Case for Diagnosis. Presented by Dr. Carroll S. Wright.

L. F., a man aged 25, on examination on Sept. 26, 1935, showed multiple, fairly deep ulcerations, with a few pea-sized, unruptured pustules. Many of the ulcers were crusted, and attempts to remove the crust resulted in profuse bleeding. The majority of the lesions were on the left leg, although there were a few on the right leg. The largest ulceration was on the posterior aspect of the middle third of the left leg, and the surface presented an extensive greenish pellicle. Palpation revealed an extreme tenderness of all of the lesions. On the glans penis there were two or three pea-sized vesicles. In May 1935 a small pustule developed on the left ankle. Within a short time there developed over the leg multiple pustules, which ulcerated. The patient had taken no medicine before the lesions appeared. Examination of the discharge gave negative results for any yeast or fungus. Cultures gave negative results except for cocci ordinarily found in the skin. The Wassermann and the Kahn tests of the blood were negative. Biopsy indicated a chronic ulcer; fungous organisms were not identified. Under treatment with potassium permanganate, application of wet dressings, roentgen irradiation and administration of potassium iodide healing of old ulcerations took place but new lesions continued to appear.

DISCUSSION

Dr. Abram Strauss: There is one striking feature, namely, the difference in size between the leg that is ulcerated and the leg that is not involved. This leads me to think that there may be involvement of a nerve center.

Dr. S. S. Greenbaum: I have seen disorders of this sort, and I have come to the conclusion that they are best classified as pyoderma gangraenosum. Ulcer after ulcer develops as a result of symbiotic infections in a skin below par. These ulcers are not common, and they are extremely resistant to treatment.

DR. F. D. WEIDMAN: The first thing I thought of was Vincent's disease, but the patient has not had lesions in the mouth and the lesion does not have the disgusting odor of lesions of Vincent's disease. My second thought was erythema induratum, but I am satisfied that the disorder is not that; hence the alternative is Dr. Greenbaum's diagnosis of symbiotic infection.

DR. FRANK C. KNOWLES: Could not the condition be due to a localized embolism? A patient of mine was struck, while dancing, on the lower part of the leg by a woman's high-heeled slipper. Almost exactly the same type of lesions as those exhibited by Dr. Wright's patient developed from an embolus. That patient, however, had a contributory circulatory condition.

DR. CARROLL S. WRIGHT: I believe that the diagnosis of erythema induratum can be definitely ruled out. In the first place, these lesions appear as dark purplish buttons within twenty-four hours and then ulcerate rapidly and in a week's time are completely healed. In the second place, the histologic picture of erythema induratum, which is quite typical, is lacking. The most effective treatment has been application of an ointment containing 80 per cent cod liver oil and 20 per cent white wax. The lesions heal, but new lesions develop rapidly. I was much interested in Dr. Greenbaum's suggestion because I am of the opinion that this is some process of that type. However, no organisms other than cocci ordinarily found in the skin have been discovered.

PARAKERATOSIS VARIEGATA DEVELOPING DURING TREATMENT WITH A BISMUTH PREPARATION. Presented by DR. ABRAM STRAUSS.

M. A., a woman aged 44, had received since February sixteen injections of 1.5 cc. of a suspension of bismuth subsalicylate in oil, at weekly intervals. She complained of slight itching and of a seborrheic eruption in June. The disorder became progressively worse in spite of local applications, and the administration of the bismuth preparation was therefore stopped. The Wassermann and the Kahn reaction of the blood were still positive in July. The patient received no antisyphilitic treatment after June except intermittent administration of iodides. Her general appearance was that of a poorly nourished woman, and laboratory examination indicated moderate anemia. Improvement resulted from application of a mild ointment.

DISCUSSION

DR. ABRAM STRAUSS: Dr. Weidman remarked that he did not think that this condition was a parakeratosis but that he rather regarded it as a hyperkeratosis.

DR. F. D. WEIDMAN: The sections show no parakeratotic changes. I do not want to say more than that because I cannot offer any better diagnosis. I did notice some keratoses on the sole, although, again, I cannot follow that up with any suggestion.

DR. ABRAM STRAUSS: This condition developed while the patient was receiving a preparation of bismuth. She received no arsenicals, as far as I know. The eruption started as a mild dermatitis, which shortly developed into what seemed to threaten to become an exfoliating dermatitis. Soothing applications brought about improvement, and then this condition developed. The eruption is better than it was a few weeks ago.

DR. S. S. GREENBAUM: Some years ago my co-workers and I presented at the Atlantic Dermatological Conference a patient whose skin looked much like this woman's. We presented her as having Jacobi's poikiloderma, and the diagnosis was generally accepted. The condition exhibited by this woman looks exactly like that in our patient; there are telangiectases and superficial rhomboidal atrophies scattered all over the skin.

ROSACEA-LIKE TUBERCULID OF LEWANDOWSKY. Presented by DR. S. S. GREENBAUM.

E. C., a woman aged 30, presents over both cheeks and over the chin an erythematous eruption with flat papular pinhead-sized lesions of one year's duration; there are minute points of questionable atrophy. The lesions have steadily increased in number. The patient was admitted to the hospital on account of acute, severe vomiting associated with recent loss of weight. She had quiescent pulmonary tuberculosis and had been bedfast at intervals during the last four years. Medical examination revealed no organic disturbances. The diagnosis was "probable anxiety neurosis." The blood cell count did not show anything abnormal. The Wassermann and Kahn reactions were negative; no bromides were found in the blood.

DISCUSSION

DR. S. S. GREENBAUM: I saw this patient for the first time this afternoon, and the diagnosis given is offered by exclusion. Under pressure with the diascope some of the lesions look like miliary lupus vulgaris. The disorder is certainly one of the milder types of miliary lupus vulgaris or rosacea-like tuberculid of Lewandowsky.

DR. FRANK C. KNOWLES: There is marked seborrhea. Drops of sebaceous material stand out on the patient's nose, and the appearance of the lesions is different from the picture which was present in the two or three cases of tuberculid that I have seen; in those cases the lesions were somewhat larger and more discrete. I think it would be wise to try treatment with a gold preparation, but I should like to have an explanation for the marked seborrhea which is present in addition to the rosacea-like lesions.

HIDRADENITIS SUPPURATIVA. Presented by DR. EDWARD F. CORSON for DR. FRANK C. KNOWLES.

B. H., a woman aged 22, presents in the left axilla an inflamed swelling, discharging sinuses and scars in the hairy area. The right axilla shows only scars. The condition began six or seven years ago, appearing simultaneously on the two sides. There were boil-like swellings which opened and discharged, healing with scars and draining sinuses. The patient has undergone five excisions and one cauterization. The basal metabolic rate was + 15 per cent; urinalysis gave negative results. The blood count was normal. The Wassermann and the Kahn reaction were negative.

DISCUSSION

DR. EDWARD F. CORSON: This appears to be a typical picture, with involvement of various sweat glands by pyogenic organisms, development of sinuses and formation of scars. Cases have been reported, of course, in which the disease affected the pubic and other regions.

DR. ALLEN D. KING (Wilmington Del.): This is the counterpart of the picture presented by a patient who was shown before this society last spring, namely, a young girl with similar lesions in both axillae. It was thought at the time that there might be a bilateral tuberculosis of the axillae because some acid-fast organisms had been found in the smear, but inoculation of two series of guinea-pigs and simultaneous culture failed to demonstrate any definite tuberculous organisms. The patient did not respond well to any form of treatment but improved most as a result of roentgen therapy; she became worse again after administration of a gold preparation, and at present there is no hope of her ever getting well. The bacteriologist, when making his final report, seemed to be of the opinion that the disorder was an infection due to some type of acid-fast organism probably involving the sweat glands.

DR. FRANK C. KNOWLES: It is rather interesting that almost all the cases of this disorder in this location have occurred in women. The best article in English on hidradenitis suppurativa was written by the late Dr. John E. Lane.

Book Reviews

Die angeborene Syphilis im Lichte 30 jähriger Spirochäten und 24 jähriger Salvarsanforrschung. By Erich Hoffmann. Berlin: S. Karger, 1936.

This small book deserves a longer review than usual because it ably summarizes a whole subject. Hoffmann states that the object of his paper is to eradicate false conceptions that still exist about congenital syphilis and to unite obstetricians, dermatologists and pediatricians in the fight against the disease.

In the chapter on pathogenesis full credit is given to the late Rudolf Matzenauer for his keen realization of the maternal transmission of syphilis at a time (1903) when the spirochetes of syphilis and the Wassermann reaction were not yet discovered and for his upright fight against the theory of paternal transmission, an opinion then held by the leading scientists. The difficulties in eradicating erroneous beliefs are illustrated by the quotation of publications which appeared as late as 1929 in which the actual facts were obviously misinterpreted. The author also condemns the French theory of *choc en retour* and thinks that among proofs against it is the fact that it has never been possible to demonstrate spirochetes with certainty in the fetus of a syphilitic mother or in the fetal part of the placenta before the fifth month of pregnancy.

Matzenauer's thesis, "There is no syphilitic child without a syphilitic mother," could be enlarged by later investigations showing that placental transmission takes place during the second half of pregnancy only. The irregularities in the transmission and the differences in the intensity of the disease are explained in a scientific and logical manner. The theory of the occurrence of syphilis congenita binaria (i. e., placental infection shortly before birth plus superinfection during passage through the birth canal, with the subsequent development of a primary lesion) is discussed and upheld. Concerning acquired syphilis in infants, Hoffmann criticizes certain erroneous conceptions to be found in textbooks and handbooks, e. g., illustrations representing syphilitic alopecia as a late recurrence of prenatal syphilis (while it is an early recurrent symptom of acquired syphilis). Leukoderma and hypertrophic condylomata lata likewise indicate acquired and not prenatal infection. Statistics are quoted from various countries which show the considerable decrease of prenatal syphilis. Much space is given to the discussion of *hérédo-dystrophie* of the French school. The author does not believe in the possibility of damage to the *Keimplasma* or in the effect of "syphilitic toxins." He thinks that confirmation of such exaggerated theories requires experimental proof on pregnant animals. Thus, the conception of racial degeneration by syphilis and manifestations such as vitiligo, alopecia areata and the tuberculum Carabelli are rejected. In the chapter on pathology mention is made that it is not correct to speak of "septicemia" in syphilis, for only rarely can spirochetes be found in the blood, the anaerobe Spirochaeta pallida being a parasite of lymphoid and connective tissue which leaves the blood stream as quickly as it can. The important phases of prenatal syphilis of the bone are well presented. The reason why roentgenograms of the lower extremities of the new-born are preferable to roentgenograms of the arms is explained. The difference between "miliar-syphilomas" and true gummas is discussed. In the chapter on clinical phenomena, in which the common manifestations are only briefly reviewed, Hoffmann states that encapsulated nests of spirochetes in the epiphyseal line may be the explanation for Wassermann-fastness or for the reversal of the Wassermann reaction on provocation. Hochsinger's equivalent to Hutchinson's triad, *die kongenitalsyphilitische Frühtrias*, consisting of deformities of the skull, rhagadiform scars and palpable epitrochlear lymph nodes, is discussed. Among dental changes, Hoffmann recognizes only the hutchinsonian teeth, the Fournier teeth and the mulberry molars as fairly

characteristic. Concerning involvement of the central nervous system, it is stressed that the changes in the spinal fluid are found far more frequently in early infancy than later, which is explained by spontaneous or therapeutic involution. In the chapter on diagnosis the author advocates curettage of the tonsils and mucous membrane of the nose as a routine procedure for dark-field examination. Among roentgen diagnostic procedures, Stokes' method of diagnosing hidden hutchinsonian teeth is advocated. A period of serologic observation of six months is demanded in suspected cases. For eradication of the disease a routine examination of every pregnant woman by maternity centers, social agencies and physicians should be made. Not every one will agree with Hoffmann that a woman who has been exposed to a husband who has fresh syphilis should be treated immediately, even in the face of negative results of dark-field examination. The plan of treatment is the familiar *Bonner Kursystem,* which differs in many respects from the methods used in this country.

In his conclusions Hoffmann states that the most valuable fruits of scientific labor in this field are Matzenauer's discovery that the pregnant woman is the sole transmitter of syphilis and that only from the fifth month on is there danger of transmission. With these fundamental facts as a basis, it should be possible to eradicate the disease by proper examination of every pregnant woman before the fifth month and by prenatal and postnatal preventive treatment, if the obstetrician, dermatologist and pediatrician work together.

Directory of Dermatologic Societies *

INTERNATIONAL

NINTH INTERNATIONAL CONGRESS OF DERMATOLOGY AND SYPHILOLOGY
American Secretary: Dr. Howard Fox, 140 E. 54th St., New York.

FOREIGN

BRITISH ASSOCIATION OF DERMATOLOGY AND SYPHILOLOGY
(CANADIAN BRANCH)

H. A. Dixon, President, Medical Arts Bldg., Toronto, Ont.
Norman Wrong, Secretary-Treasurer, Medical Arts Bldg., Toronto, Ont.

ROYAL SOCIETY OF MEDICINE, SECTION OF DERMATOLOGY

H. W. Barber, President, 7, Devonshire Pl., London, W. 1.
Louis Forman, Secretary, 7, Devonshire Pl., London, W. 1.

NATIONAL DERMATOLOGIC SOCIETIES

AMERICAN MEDICAL ASSOCIATION, SCIENTIFIC ASSEMBLY, SECTION ON DERMATOLOGY AND SYPHILOLOGY

Paul A. O'Leary, Chairman, 102 Second Ave., S.W., Rochester, Minn.
J. Bedford Shelmire, Secretary, 1719 Pacific Ave., Dallas, Texas.
Place: Atlantic City, N. J. Time: June 7-11, 1937.

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOLOGY

Howard Fox, President, 140 E. 54th St., New York.
C. Guy Lane, Secretary, 416 Marlborough St., Boston.

AMERICAN DERMATOLOGICAL ASSOCIATION

C. Guy Lane, President, 416 Marlborough St., Boston.
F. D. Weidman, Secretary, University of Penssalvania, Philadelphia.

SECTIONAL DERMATOLOGIC SOCIETIES

CENTRAL STATES DERMATOLOGICAL ASSOCIATION

Samuel Goldblatt, President, 3208 Colerain Ave., Cincinnati.
Raymond G. Senour, Secretary-Treasurer, 19 W. 7th St., Cincinnati.
Place: Cleveland. Time: Dec. 5, 1936.

MISSISSIPPI VALLEY DERMATOLOGICAL SOCIETY

Samuel Goldblatt, President, 3208 Colerain Ave., Ciscinnati.
Raymond G. Senour, Secretary-Treasurer, 19 W. 7th St., Cincinnati.

NORTHERN NEW JERSEY DERMATOLOGICAL SOCIETY

Henry J. F. Wallhauser, President, Medical Tower, Newark.
Louis J. B. LeBel, Secretary, 165 Grant Ave., Nutley.
Place: Academy of Medicine of Northern New Jersey, Newark. Time: Third Tuesday of January, March, May, September and November.

* Secretaries of dermatologic societies are requested to furnish the information necessary for the editor to make this list complete and to keep it up to date.

SOUTHERN MEDICAL ASSOCIATION, SECTION ON DERMATOLOGY AND SYPHILOLOGY

Jack W. Jones, Chairman, 384 Peachtree St., Atlanta, Ga.
Winston U. Rutledge, Secretary, 332 W. Broadway, Louisville, Ky.
Place: Baltimore. Time: Nov. 17-20, 1936.

STATE DERMATOLOGIC SOCIETIES

CALIFORNIA MEDICAL ASSOCIATION, SCIENTIFIC ASSEMBLY, DERMATOLOGY AND SYPHILOLOGY SECTION

Thomas J. Clark, Chairman, 400, 29th St., Oakland.
George V. Kulchar, Secretary, 450 Sutter St., San Francisco.

CONNECTICUT STATE MEDICAL SOCIETY, SECTION ON DERMATOLOGY

Maurice J. Strauss, Chairman, 41 Trumbull St., New Haven, Conn.
Edward A. Abbey, Secretary, 442 Temple St., New York.

FLORIDA SOCIETY OF DERMATOLOGY AND SYPHILOLOGY

J. L. Kirby-Smith, Chairman, 204 Laura St., Jacksonville.
W. M. Sams, Secretary, 310 Ingram Bldg., Miami.

LOUISIANA DERMATOLOGICAL SOCIETY

M. T. Van Studdiford, President, 912 Pere Marquette Bldg., New Orleans.
R. A. Oriol, Secretary-Treasurer, Maison Blanche Bldg., New Orleans.

MASSACHUSETTS MEDICAL SOCIETY, SECTION ON DERMATOLOGY AND SYPHILOLOGY

Harvey P. Towle, President, 453 Marlborough St., Boston.
Rudolf Jacoby, Secretary, 270 Commonwealth Ave., Boston.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, SECTION ON DERMATOLOGY AND SYPHILOLOGY

Louis Tullipan, Chairman, 224 E. 17th St., New York.
C. H. Peachey, Secretary, 197 S. Goodman St., Rochester.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA SECTION ON DERMATOLOGY

Abraham Strauss, Chairman, Medical Arts Bldg., Philadelphia.
L. G. Bembauer, Secretary, 5026 Jenkins Arcade Bldg., Pittsburgh.

MICHIGAN STATE MEDICAL SOCIETY, SECTION ON DERMATOLOGY AND SYPHILOLOGY

A. E. Schiller, Chairman, 10 Peterboro St., Detroit.
G. Warren Hyde, Secretary, 2501 W. Grand Blvd., Detroit.

MINNESOTA DERMATOLOGICAL SOCIETY

L. H. Winer, President, 78 S. Ninth St., Minneapolis.
F. W. Lynch, Secretary, Lowry Medical Arts Bldg., St. Paul.
Time: First Wednesday in October, December, February and April.

OKLAHOMA STATE DERMATOLOGICAL SOCIETY

Charles P. Bondurant, President, 412 Medical Arts Bldg., Oklahoma City.
Darrell G. Duncan, Secretary, 914 Medical Arts Bldg., Oklahoma City.

TEXAS DERMATOLOGICAL SOCIETY

J. C. Michael, President, 1215 Walker Ave., Houston.
Everett R. Seale, Secretary, 1215 Walker Ave., Houston.
Place: Austin.

LOCAL DERMATOLOGIC SOCIETIES

Baltimore-Washington Dermatological Society

Dudley C. Smith, President, University of Virginia Hospital, Charlottesville, Va.
Francis A. Ellis, Secretary, 104 W. Madison St., Baltimore.

Bronx Dermatological Society

Paul Gross, Chairman, 35 E. 84th St., New York.
Henry Silver, Secretary, 290 West End Ave., New York.

Brooklyn Dermatological Society

Samuel Hecht, President, 679 Greene Ave., Brooklyn.
Mortimer J. Cantor, Secretary, 907 St. Marks Ave., Brooklyn.
Time: Third Monday of each month except June, July, August and September.

Buffalo-Rochester Dermatological Society

Earl L. Eaton, President, 40 North St., Buffalo.
Richard L. Saunders, Secretary, 333 Linwood Ave., Buffalo.

Central New York Dermatological Society

George M. Fisher, President, 264 Genesee St., Utica.
Rudolph Ruedemann Jr., Secretary-Treasurer, 214 State St., Albany.

Chicago Dermatological Society

Max S. Wien, President, 104 S. Michigan Ave., Chicago.
Reuben Nomland, Secretary, 25 E. Washington St., Chicago.

Cincinnati Dermatological Society

Raymond G. Senour, President, Carew Tower, Cincinnati.
Leon Goldman, Secretary-Treasurer, Doctors Bldg., Cincinnati.

Cleveland Dermatological Society

John E. Rauschkolb, President, 1705 Medical Arts Bldg., Cleveland.
C. L. Cummer, Secretary, 1010 Hanna Bldg., Cleveland.

Detroit Dermatological Society

W. G. Wander, President, 509 Kresge Bldg., Detroit.
G. Warren Hyde, Secretary-Treasurer, 2501 W. Grand Blvd., Detroit.

Los Angeles Dermatological Society

N. P. Anderson, Chairman, 2007 Wilshire Blvd., Los Angeles.
Thomas W. Nisbet, Secretary, 65 N. Madison Ave., Pasadena, Calif.
Time: Second Tuesday of each month, October to May, inclusive.

Manhattan Dermatologic Society

Isidore Rosen, Chairman, 106 E. 54th St., New York.
Mihran B. Parounagian, Secretary, 126 E. 39th St., New York.

Montreal Dermatological Society

B. Usher, President, 1538 Sherbrooke St., W., Montreal, Canada.
Paul Poirier, Secretary, 456 Sherbrook St., E., Montreal, Canada.

New England Dermatological Society

William P. Boardman, President, 388 Marlborough St., Boston.
J. Harper Blaisdell, Secretary, 45 Bay State Road, Boston.

NEW YORK ACADEMY OF MEDICINE, SECTION OF DERMATOLOGY AND SYPHILIS

J. Gardner Hopkins, Chairman, 102 E. 78th St., New York.
David Bloom, Secretary, 135 E. 50th St., New York.

NEW YORK DERMATOLOGICAL SOCIETY

R. H. Rulison, Chairman, 114 E. 62nd St., New York.
Eugene F. Traub, Secretary, 140 E. 54th St., New York.

OMAHA DERMATOLOGICAL SOCIETY

J. A. Borghoff, Chairman, 1319 Medical Arts Bldg., Omaha.
Donald J. Wilson, Secretary, 1113 Medical Arts Bldg., Omaha.

PHILADELPHIA DERMATOLOGICAL SOCIETY

Vaughn C. Garner, Chairman, Germantown Professional Bldg., Philadelphia.
Thomas Butterworth, Secretary, 238 N. 5th St., Reading, Pa.

PITTSBURGH DERMATOLOGICAL SOCIETY

Emerson Gillespie, President, 120 Tuscarawas St., Canton, Ohio.
Joseph J. Hecht, Secretary, 506 Medical Arts Bldg., Pittsburgh.

ST. LOUIS DERMATOLOGICAL SOCIETY

A. H. Conrad, President, 3720 Washington Blvd., St. Louis.
Roy L. Kile, Secretary-Treasurer, 3720 Washington Blvd., St. Louis.
Place: Barnard Free Skin and Cancer Hospital. Time: Second Wednesday of each month.

SAN FRANCISCO DERMATOLOGICAL SOCIETY

L. R. Taussig, President, 384 Post St., San Francisco.
John M. Graves, Secretary, 909 Hyde St., San Francisco.